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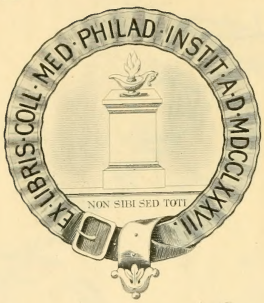

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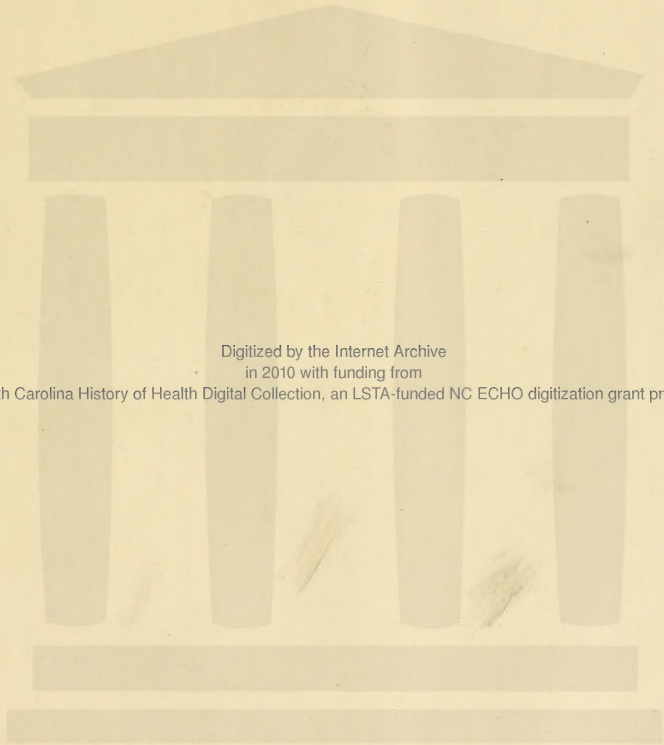

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The Charlotte Medical Journal.

VOL. XXVII. CHARLOTTE, N. C., JULY, 1905. No. 1

A Plea for Prompt and Thorough Action in Gunshot and Other Wounds of the Abdomen, with Report of Cases.*

By W. O. Spencer, M. D., Winston, N. C.

When asked to contribute a paper on this occasion upon some surgical subject, it occurred to me that the above subject, being of more than ordinary interest to myself, would perhaps be as interesting to others as any topic that I could select, and should I fail to present anything new, I shall at least try to make very emphatic a few points that I hope to bring out, and I will be very glad to procure a full and free discussion of same for the benefit of us all.

It is a well known fact, gentlemen, that the text-books by most authorities give us such a frightful prognosis in cases of this kind that we can not fail to look forward with some degree of trepidation in dealing with them. At the same time, as practicing physicians and surgeons, we are liable to be called upon at any time to treat such cases, and while I am fully aware that the gravest opinions have been rendered upon like injuries by men of eminence in military, as well as private practice, notwithstanding this, if I can succeed in dispelling from the minds of some of you the old accepted idea, that all wounds, inflicted in the abdominal viscera by gunshot or otherwise, are necessarily fatal; in the main, I shall not feel that I have consumed your valuable time altogether in vain.

No man, when brought face to face with cases like these, can afford to give up in dispair, and after administering a few simple remedies, await the setting in of septic peritonitis, or in other words—death; for I declare to you, that in this day of perfected surgical technique and asepsis such treatment as that is a thing of the past.

To begin with, we should bear always in mind the causes of death of such patients. They are:

Hemorrhage, shock, primary or secondary.

Sepsis followed by septic peritonitis, or gangrene with necrosis.

Intestinal obstruction subsequently.

We all recognize the fact that when there is perforation and the escape of effete matter, if left unattended, peritonitis will surely set up, and a fatal ending will result; so, when called to a patient with a penetrating wound of the abdomen, if shock or hemorrhage has not already destroyed the patient, we should at once, under thorough aseptic precaution, without delay explore and ascertain the damage done and repair same. I unhesitatingly declare that an exploratory incision is almost absolutely necessary, for after the use of the probe, hydrogen gas inflation, etc., we can feel obsolutely certain of the condition, only, after we have cut down and thoroughly inspected the wounded parts.

I am sure we all have our own individual method of procedure, but if you will kindly bear with me, I shall try to give you a few points that have proven very successful in my own practice.

To begin with, thoroughly cleanse the field around the entrance of penetrating missile, making the incision immediately through or to one side of wound, with the greatest care paring off or removing all tissue surrounding the point of entrance, in order, first to remove all chance of there being any septic material left in abdominal wall through skin, fascia muscles and serious courts; and secondly, becacse there is always a certain amount of shock to this tissue, by concussion, which, if left, will more than likely set up necrosis or suppuration, which must give rise to trouble subsequently. For these reasons, I have abandoned the median line incision idea as recommended by many text-books. When there is evidence of concealed hemorrhage present, this should receive our first and prompt attention, under thorough aseptic measures, if possible, but if not possible, it should even then be attended to and controlled at once, conveying the least sepsis therein possible.

Upon entering cavity, a painstaking and systematic inspection of viscera should be made in order to find all perforations, and I would impress upon your mind the fact that we cannot be too careful concerning this matter, for you recognize the fact that a single rent overlooked would cause all else to be useless. I beg leave to also make very emphatic the point of removing all tissue in track of missile beginning at the point of entrance, for therein lurks sepsis, gangrene and every evil.

If perforations are found in stomach or colon, where we have sufficient room to make a double V-incision in long axis and close with Lembert's or any other suture, using silk or catgut. After approximating the various croats of viscera with interrupted or continuous sutures, passing through the serous, muscular and submucous, and

* Read before the recent meeting of the North Carolina Medical Society at Greensboro.

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into but not through the mucous, then overlaying or fortifying this line of sutures by passing through and through the serous coat, on each side, thus fortifying your first line of sutures, using fine silk continuous sutures, for this.

Should the small intestines be wounded, it is best to follow a like procedure, provided, however, the caliber of the intestines is not too small to admit of a double V-incision, for if too much is cut away, it will be likely to produce stricture of the bowel, and to prevent this, it is best to resect the bowel and remove offending tissue and close with a Murphrey's button or end to end anastomosis.

The latter is very easily done where the operator is a good sewer, and is often necessary because we do not always have a Murphrey's button at hand. We insist that great care should be employed in closing all rents or openings in the mesentery to prevent the bowels knuckling through and thereby causing obstruction of the bowels later. After a most careful study of the subject, to sum it all up, from observation and experience, we would arrive at the following conclusions:

(1) Control hemorrhage.

(2) If shock or hemorrhage has not produced death, operate as early as possible, for if delayed until peritonitis sets in, it will be too late; operate if possible, early enough to prevent contents of bowels from escaping and becoming dry and adhering to the peritoneum.

(3) Diligently search for all perforations; one left unclosed will cause all your work to be useless.

(4) Close all perforations in manner described above, being very careful to leave no shooked tissue around track of ball or any that could possibly be septic.

(5) Thoroughlycleanse all escaped fœcal matter and blood from peritoneal cavity.

(6) Flush cavity thoroughly with hot saline solution.

(7) Keep just as small amount of bowel exposed as possible and keep that covered with sterilized towels, rung out of hot saline solution.

(8) Do not delay things by hunting for the lost ball, especially if it has passed into the deep muscles of the back, make aseptic its entrance, and close with catgut sutures, this will promptly close and will prevent escape of septic matter back into cavity in event of suppuration around where the ball is embeded. Should suppuration occur, thus the ball can be readily located, or by skyagraph, and then can be removed.

(9) Close with or without drainage, depending on conditions; in most cases, close without drainage, leaving cavity full of saline solution 105 to 110 deg., in order first to prevent shock to viscera; and second, to dilute such escaped material as may have been overlooked, which material the peritoneum will absorb after it is thus diluted.

(10) Give no solid food until all repair is complete.

(11) By all means follow the entrance of projectile, be it ball, shot, knife, or any other implement. Make the septic wound an aseptic one by trimming away all possible septic or shocked tissue. If you will pardon me, I beg leave to condemn the puckering or purse-string method of closing a wound in stomach, bowel or bladder, though recommended by some men of eminence, still as a routine practice, it seems to me to be a pernicious one, unless you can be absolutely sure you have made the wound clean, and that there is no shock to tissue surrounding the entrance of missile, and of this we cannot be absolutely sure, so my advice is to remove such tissue, for we can only then know that we have an aseptic field with which to deal. If you remember, gentlemen, it was the method above condemned, that was used upon our chief magistrate, Mr. McKinley, and so strongly am I opposed to the method, that I went so far as to predict his untimely end, when I noticed the published technique of the operation, although everything seemed so favorable, and the autopsy did reveal an aureola of gangrene just at this point in the anterior and posterior gastric wall.

(12) If the solid organs of abdomen, liver, kidneys, spleen or pancreas be likewise injured, the same treatment should be followed, viz: control hemorrhage, trim out very carefully the track of missile, and either close with suture or pack with sterile gauze with counter drainage, and treat as an open wound.

I have carefully followed the above technique in the cases that have fallen into my hands, and I have never had cause to regret it, as thus far, I have been fortunate in all cases entrusted to my care.

With your permission, I beg leave to submit the following cases:

Case I.—Sam R., white, age 12 years on ——189—; while playing with an "empty" pistol, discharged it and sent a 38 caliber ball through abdominal wall entering half way between ant. sup. spine and median line of left side, coming from right hand ranging downward and backward. Upon opening abdomen found it had passed through descending colon just above sigmoid flexure embedding itself in or behind deep muscles of pelvis posteriorly, striking illium, it glanced and was lost.

On entering abdomen made incision through track and following course of the

ball, removing all tissue that had come in contact with it, making a double V-shaped incision in long axis of colon, removing all tissue near track of ball which might be infected or shocked, thereby causing necrosis or gangrene. This done, it was closed with Lambert's suture overlaying or fortifying with peritoneal fold with continuous silk suture. Having thus treated the anterior wall, the colon was turned over and treated posteriorily in like manner.

The entrance into muscle was made as clean as possible. All escaped matter was cleaned out with dry gauze and cavity flushed with warm saline solution, closed with through and through silk worm gut without drainage, leaving cavity full of saline solution.

The ball, having struck the bone at such an angle, glanced and was lost deep down in pelvis. It passed under or near the nerves supplying the leg, giving rise to pain and a slight impairment in motion, all of which gradually cleared up. I made no search for ball, and for several months it gave no further trouble, until later pain was felt upon evacuating the bowels. Upon examination, the ball was found lodged in rectal fossa above sphincter and levatiani muscles, which I removed through wall of rectum without closing opening. No further trouble; recovery.

Case II.—On January 27th, 1902, was called in haste to see R. G., age 22, white; found he had received a wound with 38-caliber pistol ball midway between umbilicus and pubis 1½ inches right of median line. Attempted to probe for ball, but could not get below first layer of muscle, as they were overriding each other. I was in some doubt as to whether the ball had rebounded and fallen out or entered the cavity, but as we did not find it in the clothing, concluded the latter. I immediately ordered him carried to the hospital and as quickly as possible made an incision just over track of ball, carefully trimming with scissors all tissue surrounding the track, before entering the peritoneum. Upon entering cavity seven perforations were found in the small intestines and two in ascending colon, passing through both walls penetrating the (tœnia coli) longitudinal ribbon muscular band.

All perforations were closed in the manner described above (after removing all tissue with which the ball had come in contact) except in one place in the small intestines four punctures were found in a short curve; the perforations were so close together here and so bloodshot, I feared either sepsis gangrene or stricture later, so decided to resect five inches of bowel and closed with a Murphrey's button (medium size being used). The ball entered the Psoas muscle striking illium, glanced and could not be located. The point of entrance was cleansed in the best manner possible with gauze and left to close itself, which it readily did. After closing the seven punctures, I was advised to stop, as the patient might die from shock, but being assured by my anesthetist that he was standing it very well, I proceeded to hunt for other punctures and did find two which were closed as the others. The intestines were kept covered with hot towels and as small amount kept exposed as possible and whenever fœcal matter was found escaping, it was wiped off with aseptic gauze. Feeling satisfied that there were no more rents, the cavity was flushed out with gallons of hot saline solution. After arranging sutures for closing incision with through and through silk worm-gut, I poured from pitcher hot saline solution and closed abdomen as full as possible without drainage. Convalescence was uninterrupted, little or no shock, temperature never over 99 deg. F. and passed button on the 13th day, and in five weeks the patient went home. About three weeks later the ball began to give trouble that was then located skiagraphically between illium and psoas muscle. He was again anesthesized and an incision made just over crest of illium, hugging the bone closely to avoid opening the post-peritoneal fold. Upon reaching the cavity a very tense abscess was found, the pus coming out with sufficient force to pass over my shoulder, indicating, of course, that there was no escape into peritoneal cavity. The ball was easily extracted with finger and found surrounded with infectious material, particles of clothing, etc., which had been carried through the entire cavity and contents convincing me of the necessity of getting rid of all tissue in course of the ball. Washed out cavity and drained. Recovery unmolested from this. Three and a half years later health good, no trouble.

Case III.—Clarence Freeman, colored, age 13. While out hunting a load of mixed shot was discharged from a No. 12 Bore gun at close range in the hand of a companion, the load of shot entering the abdomen about midway between ant. sup. spine of right side and median line. This happened about four o'clock p. m., and I was called to see him at about nine p. m. I found he had been trundled in a wheelbarrow about three miles and placed in a dirty cabin. I ordered him carried to Slater Hospital. Dr. Hall, colored, gave the anesthetic and Drs. Summers and Hanes assisted me in operating. We found the opening through abdominal wall to be about three-quarters to one inch large, the shot having entered in a compact manner, there being

only a few scattering perforations around. Entering the abdomen an incision diagonally downward inward was made from wound, likewise from the wound upward and out, trimming away all septic and injured tissue possible, The small intestines were found to be completely severed in two places, escape of abundant fœcal matter; after wiping away all this, but little hemorrhage was found, and we immediately proceeded to resect by first ligating each end of bowel with strips of gauze to prevent further escape of foeces. I resected some one and a half to two inches of each end of wounded gut, removing in all some six or eight inches of gut, taking out a V-shape of mesentery, closed one wound with Murphrey's button and one by end to end. Finding no other injury to viscera, the cavity was wiped out and thoroughly flushed with warm saline solution. In the mesentery a load of shot had lodged, and I thought it must be the entire load. The abdomen was closed with through and through silk wormgut without drainage. For eight days everything moved on beautifully, temperature not rising to 100 deg., and pulse not over 85, but upon the eighth day the temperature ran up to 102 deg. with some tenderness at right ant. sup. spine, on the ninth day the tenderness was localized and I made an incision at right angle from middle of incision downward to ant. spine, passed finger down behind spine and found embedded there one or two drachms of shot and shreads of clothing, removed, washed out and drained, and found no further trouble. Recovery was uneventful, passed button on 12th day. Patient discharged in five weeks and health has been good since.

Acute Catarrhal Dysentery.*

By W. H. H. Cobb, Jr., Goldsboro, N. C.

The subject of my brief paper is a disease of such common occurrence in our latitude, that never a season passes but that we are called upon to treat many sufferers; and it occurred to me that while I had nothing original to offer, still we might study it in some of its phases with interest, and perhaps profit. The term dysentery ("dus" difficult—"enteros"—intestine) is such a comprehensive one, that I have thought it best to confine myself to a discussion of one of its subdivisions, viz: Acute Catarrhal Dysentery, and to limit my paper to etiology and treatment, omitting the symptomatology, pathology, complications and sequelæ.

The best definition, perhaps, is that given by Hughes: "An acute inflammation of the mucous membrane of the large intestine, catarrhal in character, characterized by tormina, tenesmus and frequent small mucous and bloody stools." Its synonyms are colitis, colonitis, ulcerative colitis and bloody flux.

It occurs sporadically and endemically, but more often in epidemics, and is considered one of the four great epidemic diseases of the world. It is the scourge or armies, frequently causing more deaths than shot and shell, and certainly more sickness and deaths than any other disease. It ranks in malignancy and mortality with yellow fever and smallpox, and in the tropics and semi-tropical regions, where it is very prevalent, causes more deaths than cholera.

Epidemics of dysentery have occurred in the United States for more than a century, and while they may occur in temperate regions, it is more prevalent in warm climates; but from "Greenland's icy mountains to Africa's sunny clime," it lays claims to its victims, and no climate nor region is absolutely immune from its ravages.

It is one of the most ancient diseases of which we have any record, and has perhaps existed since the "fall of man," and while there is no Biblical account of any bowel trouble being the portion of Adam and Eve, who knows but that after eating the forbidden fruit herself and giving to her husband, that each may have suffered from intestinal trouble and colicky pains, along with the other sins of disobedience. What they did for relief we are not told, but perhaps they obtained some surcease from the application of their fig leaf aprons.

Its etiology is interesting, and a study of its various causes, both predisposing and exciting, is instructive. Beginning with the seasons we find that heat is one of the predisposing factors, as shown by increased number of cases occurring during the late spring and summer months. It has been supposed that heat acts by producing injurious effects upon the alimentary tract, as increased excitability and disordered secretions; but it is probable that its effects are produced by aiding in the development of pathogenic organisms.

Age exerts no special influence, as it occurs at all ages, and is no respector of persons, attacking the babe at its mother's breast or with equal force invading the citadel of old age and decrepitude.

Sex is supposed to exert an influence, in that males are more liable to contract the disease than females, because of their greater exposure to various causes, but if we omit the environment of the soldier in camp and on shipboard, and prison life, my experience and observation lead me to believe

*Read before the recent meeting of the North Carolina Medical Society at Greensbor.

that the sexes, generally speaking, are equally susceptible.

Unhygienic conditions render those so situated more liable to its contraction, and especially is this observed in armies, fleets, camps and prisons. "Dysentery has followed the track of all the great armies which have traversed Europe during the Continental wars of the past two hundred years."

Enfeebled constitutions, as are found in those sufiering with tuberculosis, cancer, typhus fever and Bright's disease, cause those so afflicted to be more susceptible to its development, because of their lessened powers of resistance.

Constipation is by Virchow and others, especially the German authorities, regarded as a predisposing cause, and great stress is laid upon this condition as being a strong factor, which is no doubt true of a certain class of cases.

Malaria is a predisposing cause, as it has been shown by Aitken that in those countries where it prevails, dysentery is also prevalent.

Meteorological influences are also predisposing causes, and sudden changes in the temperature appear more harmful than variations in moisture. Hot days followed by cool nights being especially productive of dysentery.

Geological conditions are also largely responsible, as certain soil conditions predispose to dysentery by contamination of drinking water with organic matter, which renders the water a favorable medium for the development of diseases.

From the earliest ages impure drinking water has been considered an exciting cause of dysentery and bowel troubles generally. Hippocrates appreciated this fact and discussed it fully, and later Galen accepted his deductions and conclusions, and exerted his influence and efforts to the purifying of drinking water by filtration and boiling. One of the most conclusive instances of the water infection is told by Fagge in regard to dysentery in Millbank prison in England, where the disease had prevailed extensively for a long time. To quote his exact words, "In the year 1854 the prisoners ceased to be liable to dysentery, and during the next eighteen years (up to 1872) one death only occurred from that disease or from diarrhœa; indeed, so far as I am aware the immunity has continued down to the present time. Now one and only one change in the hygienic arrangement has coincided in time with this improvement in the sanitary state of the prison. Formerly the water which the convicts drank was taken directly from the Thames as it ebbed and flowed beneath the walls. But on August 10th, 1854, the artesian well in Trafalgar Square was made the source of supply to the prison; this has since continued. The change was affected in the midst of the cholera epidemic; six days afterwards the disease suddenly ceased * * *. It is, I think, impossible to avoid the conclusion that the exciting cause of dysentery in Millbank prison was the Thames water, and in all probability the noxious ingredient was derived from the sewage contained in it."

According to Strumpell, dysentery is excited by infection with an organized pathogenic poison, which may be of specific infectious or non-specific origin, about which as yet we have no absolutely irrefutable knowledge.

Dyspeptic conditions, caused by errors of diet, the ingestion of bad food, unripe fruit, unwholesome vegetables, tainted meats and canned fish are exciting causes which generally speaking, should be prevented by more rigid attention to the selection of food, and its proper preparation.

It is just at this season in our Eastern section of the State, that dysentery is most prevalent, and in a large degree I attribute the cause to be the ingestion of berries, peas, cabbage, beans, potatoes, and early imperfect fruit and vegetables generally, which together with the cool nights, following the warm, bright days, give us ideal opportunities for its development.

I will not discuss the possibility of the contagious character of dysentery, as that is a question still not fully decided.

Passing from the etiology we come to the consideration of its treatment, which may be comprehended under the three heads, rest, medicine and diet.

A patient suffering with acute catarrhal dysentery should be confined to bed.

Called to a case of acute catarrhal dysentery my first effort is directed to the removal, if possible, of the offending cause, by cleansing the entire alimentary tract, and I am guided in my choice of agents by my patient's condition. If nausea is present with coated tongue, I find no evacuant and sedative so satisfactory as small doses of calomel, soda and ipecac, followed by a saline, either Epsom or Rochelle salts. If the nausea persists, and patient rejects all medicine and food by mouth, and local applications fail to relieve, a resort to the hypodermic syringe will often prove very effective.

If there is absence of nausea and no indication of biliousness the mercurial is omitted and a saline given at once. After the bowels have been cleansed, the next indication is the relief of pain and to quiet peristalsis; these are best accomplished by the administration of some form of opium, and I confess to being partial to the deodorized

tincture, which combined with some one of the Bismuth preparations makes an excellent astringent and sedative. It is often my custom to give with these some of the digestive ferments, for in nearly all cases of acute catarrhal dysentery there is impairment of the digestive functions. Where the frequent discharges, with tenesmus and tormina continue, oftentimes relief is afforded the patient by irrigation of the colon with normal saline solution, for which I sometimes substitute warm boric acid enema; and in the later stages an injection of silver nitrate followed by saline irrigation may be used to great advantage. In those conditions in which it is impractical to introduce a rectal tube, excellent results may be obtained by elevating the hips and thus securing the benefits of high irrigation by gravity. I am not partial to irrigation with rectal tube, my preference being in favor of gravity enema, as I cannot divest myself of the belief that an ulcerated surface is intensified frequently by the direct contact of a foreign body in the colon.

If the bloody stools continue with marked straining and irritation of rectum, the introduction once in 2, 4 or 6 hours, as occasion may require, of a cocoa-butter suppository, containing for an adult, morphia sulphate gr. $\frac{1}{8}$, iodoform gr. 5, to which I sometimes add with good results, tannic acid gr. 5. I know that chemically and theoretically the addition of the last ingredient, renders the prescription incompatible, but experience has taught me that we can not always rely upon or defer to theories when confronted by conditions demanding action. Some rectums are so irritable as to refuse to admit of the presence of a suppository long enough for it to undergo solution, and in these cases I resort to the old-fashioned starch water and laudanum injections. If the rectal irritation is excessively severe the application of a 2 to 4 per cent. solution of cocaine will be found very useful to us and grateful to the patient—permitting the use of enema or suppository.

The preparations of Bismuth most commonly used by me are the sub-nitrate, subgallate and resorbisnol. In adults I am partial to large doses of the sub-nitrate, while in children I find resorbisnol is a most excellent preparation, not requiring so large a dosage. I have made no mention of the vegetable astringents, catechu, krameria, hamamelis, gallic acid, tannic acid, etc., as I rarely use them, but they are considered by many authorities excellent aids in controlling the bowels.

For the abdominal tenderness, soreness, and tympany, there are no local applications which surpass turpentine stupes or bran or hop poultices. Antiphlogistine is a candidate for honors in these conditions, and I sometimes use it, but its lauded and surpassing efficiency does not justify us in abolishing these time-honored and well-tried applications for so expensive a poultice. All stools should be disinfected before being emptied.

The tympany sometimes becomes very distressing, and where the irritability of the rectum will admit of it, the introduction of a soft tube through which is injected high into the bowels an enema of soda water or one containing tincture of asafœtida, oftentimes is followed by expulsion of large amount of gas. If acetozone 5 gr. is added to a teacupful of boiled water, and the patient allowed to drink this in small quantities frequently, this will also be found very beneficial in overcoming tympany. Salol or some of the sulpho-carbolates may be used in the early stages, combined with Bismuth as an intestinal antiseptic.

It is always my custom to restrict my patient's diet rigidly giving those articles of food easy of digestion, and which will make as little fecal matter as possible. Chicken broth, beef broth, and mutton broth are my preferences, in the order given, when animal foods are administered, and sometimes it is well to alternate these, lest the stomach wearies or revolts. Milk, an excellent article of diet, cannot always be depended upon, but boiled with the addition of a little spice, or administered raw with lime water, to which may be added the white of an egg, makes an excellent food if the stomach digests it well; but if there is flatulency, and the appearance of curds in the stools, it should be promptly omitted. Egg albumen, ginger tea, to which is added the yolk of a fresh egg lightly beaten, and wine whey, are all excellent articles of diet. For nourishing my patients through the night, and in those cases where nothing can be taken but food predigested and ready for assimilation, I am accustomed to administer peptonoids, panopepton, or some of the beef and gluten preparations. Where there is need for stimulation, and this is often the case in my experience, especially in infants, the aged, and those enfeebled from the exhausting nature of the ailment, I find nothing better than strychnia, and a reliable preparation of distilled blackberry or French brandy. The fever, if temperature runs high, is best controlled by sponge baths of alcohol and tepid water. If there is a complication of malaria the administration of quinine is not only beneficial but imperative. There is nothing better for the thirst than egg albumen and boiled water cooled with ice, to which may be added a few drops of the juice of lemon or orange.

A Plea for a More Liberal Diet in Typhoid Fever. *

By E. T. Dickinson, M. D., Wilson, N. C.

The diet in typhoid fever has been the most established point in its treatment. Whether this question is properly settled is yet to be determined, both by theory and by practice.

I know of but one theory opposing liberal feeding. This regards the prevention of perforation and has been handed down through generations as a religious principle and without question. But it will not stand the practical test, for the disease constantly stands third in mortality and counts its annual victims at fifty thousand in this country. Few or none of these deaths are caused directly by the disease but by its three complications—perforation, hemorrhage and exhaustion.

Before the free introduction of water into the treatment of typhoid fever there was the additional complication and mortality of thirst and hyperpyrexia. Immediately upon the introduction of the free use of water in the treatment of this disease the mortality rate dropped fifty per cent., because this suddenly eliminated the grave complications of hyperpyrexia and thirst. If now it is possible to reduce or eliminate the remaining complications of perforation, hemorrhage and exhaustion an equivalent reduction in the present mortality is feasible.

It is generally agreed that the profession is not acquainted with any therapeutic measures that will abort or very materially shorten the course of the disease.

Husbanding the strength from the start by skilful nursing, the judicious use of water externally and internally and the supervision of a wise medical attendant prepared to meet such indications as may arise has materially modified the course of the disease and lessened its mortality. Yet it stands third on the mortality list of the diseases in this country.

With this state of knowledge and high mortality science cannot be satisfied and must look further into the complications since this disease kills through its complications and not by its inherent nature.

The restricted diet is a relic of the historic practice of depletion. The febrile state is often an indication for more rather that less nourishment with selection as to digestibility rather than reduction in quantity. Suppurative fevers, for instance, whether of tubercular or other origin we feed to the greatest limit. The stomach tube has verified the practical test that gastric digestion is not always weakened in the febrile state. This is especially true in typhoid fever, the power of digestion being much stronger than in our chronic febrile consumptives.

It is true that typhoid fever is a self-limited disease and barring complications will subside before the course of chronic consumption and some other suppurative diseases are well begun. But the limit is often too long and the patient may die of exhaustion and want of natural alimentation before the limit expires.

When the restricted diet has for more than a few days been imposed upon a patient with typhoid fever it then becomes dangerous to digress from it. This begets a deplorable dilemma, but is the one into which many fatal cases fall, the patient now being unable to live for so long a time without nourishment and at the same time being disqualified for taking food. In a disease of such long course it is impossible to prevent accidents by putting the bowels to rest as if in splints. Lack of use of the muscular fibres of the intestinal walls cause stagnation and a state of paralysis. This paralytic and stagnant state in turn causes the intestinal walls to become inelastic and tender, aids decomposition and allows the distressing and dangerous accumulation of gases. Besides the discomfort to the patient it adds the great danger of perforation through the ulcerated point of the much stretched and thinned out intestinal wall. Moreover, the lack of nutrition to these special tissues of the body has the same destructive effect upon their integrity, elasticity and normal function as does starvation on the muscular tissues generally. An intestine in which there are no resisting contents on which to contract must soon lose its habit of contraction, although it may have nutrition sufficient to give it all the necessary power. This is one of the many reasons for giving a diet that leaves some residue in the alimentary tract after all process of absorption has taken effect.

That ulceration is caused by lack of nutrition is indicated from the well known fact that typhoid fever is not a disease of the connective tissue of the intestine but entirely of the lymphatic system. Ulceration does not occur until the second and third weeks and then probably in under-fed and under-nourished patients only.

Hemorrhage occurs in the disease not until the second and third weeks from sloughing of the Peyer's glands. This necrosis of tissue is most probably caused by the stagnant condition of the intestinal tract and the consequent increased infection of these glands. Besides being a factor In the production of sloughing and hemorrhage, non-nutrition and absence of the process of digestion render hemorrhage much more

* Read before the recent meeting of the North Carolina Medical Society at Greensboro.

fatal. Physiologists have shown experimentally that there is a marked difference in the effects of hemorrhage in animals during digestion and fasting. Prolonged abstinence from food has a notable effect in diminishing the mass of blood, as indicated by the small quantity which can be removed, with impunity from the body, under this condition. Bernard drew from a rabbit weighing about two and one-half pounds, during digestion, ten and one-half ounces of blood without producing death; while he found that the removal of one-half that quantity from an animal of the same size, while fasting, was fatal.

The direct effects of exhaustion in typhoid fever are multiple and enormous when induced by the two usual causes—lack of nutrition and high fever.

All of these are very much ameliorated or entirely averted by a full nutrition and liberal feeding.

The loss of appetite is the one condition to be overcome, and when replaced with an appetite approximating that of the normal convalescent we have established the keystone that will be found indispensible throughout the course of the disease. At first it seems unreasonable to hope to create and maintain a normal appetite in typhoid fever, but persistence does this in nearly every instance, within seven days from the beginning. It is best to begin this task with highly seasoned and concentrated broths and soups given only at the intervals of the regular meals to which the individual patient is accustomed, and then follow up quickly at the same intervals with those articles of diet that have formerly been his favorites. At this early stage the power of digestion should be the only restriction as to both quality and quantity of food. There is now during the first week no danger of either perforation or hemorrhage. The only danger to the patient is future exhaustion from persistent anorexia which is sure to prevail if appetite be not cultivated at this stage.

The appetite and digestion now being good all the secretions are re-established and the dry tongue and the cracked lips of the second week do not appear. Meteorism is slight and seldomly developes, because the muscular coat of the intestinal walls retains its tonicity and power of normal contraction and expulsion. The temperature runs a uniformly low course, because the entire alimentary canal is constantly and normally being bathed in fresh and nutritious contents rather than foul and stagnant debris sloughing from the infected glands. A few cases of hyperpyrexia occur, but with the full limit of digestible food and nutrition these are fortified and lose but little of their reserve flesh and strength and maintain their mental equilibrium throughout the attack. I have never seen delirium or subsultus tendinum develop in a well fed and well nourished patient. I have seen no boils and abscesses, no diarrhœa and bedsores.

Treatment of typhoid fever on this plan has been entirely satisfactory to me and proportionately satisfactory to others, as they have been willing to adopt at the beginning the method in full or in part. I have treated in this way a few more than one hundred patients. About ten cases were selected from each consecutive year from 1895 to 1905, this number being all that came under my care presenting throughout clear typhoid symptoms. Not one of the number had any alarming complication, with the single exception of one who had persistent hyperpyrexia. Nearly all were able during the entire course of the disease to sit upon the commode by the bed, which I think is a great factor in the prevention of perforation. Theoretically nothing could be more conducive to perforation than the unnatural straining required to produce the guiser-like action of the bowels when the hips are elevated upon a bedpan.

In order to make more definite the course outlined above, I report from the chart the case of hyperpyrexia previously referred to. I give the list of diet and the corresponding dates and temperature. Treatment was begun by me only until the second week of the disease.

During the second week the lowest recorded temperature was 97.6 (sudden decline) deg., and highest 105.6 deg., the average 104.1 deg. The diet given throughout the week was chicken soup, eggnog, coffee, albumenized lemonade, buttered toast with tender boiled chicken, scraped beef, boiled fresh fish, scrambled eggs, fresh ripe peaches, ice cream and sherbet.

During the third week the lowest temperature was 98.8 deg., the highest 103.8 deg., the average 101.6 deg. The diet was toast, corn muffins, biscuit and butter, squab, tender boiled beef, young chicken, fresh boiled fish, rolled oats, coffee, sherbets of various kinds, fresh peaches, baked apple with cream, chipped ice and pineapple juice.

During the fourth week the lowest recorded temperature was 98 deg., the highest 101 deg., the average 99 deg. After this time the temperature remained normal and the patient quickly regained his former health notwithstanding his taking the most liberal diet served at his will from the family dining table.

At the end of this fourth week this patient was discharged from the institution and from treatment. He was then able to

walk easily with confidence in himself and without assistance of others and all artificial sopport.

After following up the plan of free feeding and noting the practical results a few conclusions force themselves upon us.

Free feeding and typhoid fever are not incompatible, but almost any form of diet is dangerous after a very restricted regime combined for any considerable time with typhoid fever.

The restricted diet brings upon the patient unnecessary and great weakness, insures an unnatural and ravenous appetite during convalescence, and thereby places him in the greatest danger and at the same time takes away his power of resistance.

A liberal diet conserves the patient's energies and strength and thereby averts the rampant and uncontrolable appetite so commonly experienced by convalescents.

Liberal feeding throughout the course of typhoid fever shortens its duration to the minimum and renders the convalescent stage almost nil.

Neurasthenia.*

By J. Thomas Wright, M. D., Winston, N. C.

Neurasthenia is a rather comprehensive term derived from the Greek "neuron" nerve, and "asthenia," exhaustion or weakness, and covers a variety of functional disturbances of the nervous system, with great irritation and lowered vitality.

It is due to a variety of causes, chief among which are the strenuous life, excesses of various kinds, overwork and worry. Neurasthenia, also, is often a result of other diseases, such as influenza, typhoid, syphilis, alcoholism or chronic narcotism, surgical operations, anæmia, shock, injuries, autointoxication, impaired metabolism, and in women menstrual or other troubles of the generative organs, such as prolapsus, lacerations, the menopause, etc. In males, prostatitis and masturbation are causitive factors.

Most authors acknowledge that heredity plays an important role by endowing the individual with a neuropathic tendency, and point to the progeny of tubercular, alcoholic or syphilitic parents as proof.

There is a close relationsqip between neurasthenia and the sexual function.

Neurasthenia usually occurs between the ages of 15 and 45.

Symptoms.—Great fatigue—mental and physical—occasioned by the least exertion of body or mind, general irritability of the whole nervous system, with vagaries of any of the special senses and intractable insomnia, are the more pronounced symptoms.

The mind is irritable and apprehensive and there is loss of memory. Curious and interesting mental perversions are frequent, and melancholia is often pronounced.

The reflexes are heightened, and muscular tremors in the extremities are seen. The spine is nearly always sensitive, and backache is a persistent symptom. The urinary secretion is generally increased, the fluid being of a low specific gravity. There may he obstinate constipation, or a watery diarrhœa. Exhaustive sweats occur and there is usually a coldness of the hands and feet—sometimes a subnormal temperature.

Tachycardia is a prominent symptom, and headaches are common. Anorexia is often pronounced. Hyperæsthesia of various parts of the body often occurs, and an interesting symptom, seen sometimes, is severe pain in the region of the appendix simulating appendicitis. A sense of suffocation, throbbing of the arteries and vertigo are common symptoms. Vision is usually impaired. There is more or less sexual impotence.

Pathology.—There is a starvation of the nerve cells, due to deficient metabolism, with an accumulation of the waste products of the body, which enter the circulating medium, causing an autointoxication, and irritation of the cortex, and through the nervous system an inhibition, or perversion of the functions of various organs.

The body secretions are altered, the kidneys rarely throw off the solids like they should and uric acid accumulates and adds to the irritability of the already quivering nerves.

The nutrition of the whole body is usually greatly impaired. There is evidently *deficient oxidation*—a point which should be remembered in the treatment. The absorption of toxines from the intestinal canal—caused by changes in the digestive juices, by imperfect digestion, fermentation and by bacteria, constantly takes place, and is the chief cause in perpetuating the trouble.

One should remember, in studying functional nervous troubles, that severe mental strain, grief, great worry, or marked depression will alter or inhibit the secretions of a number of the organs of the human body.

Close study and clinical observation have led me to believe that the primary, or essential, causative factors in hysteria, neurasthenia, and incipient insanity are closely allied and correlated.

Prognosis.—While these cases are exceedingly hard to treat, still, with tact, persistence and careful, thorough treatment,

*Read before the recent moeting of the North Carolina Medical Society at Greensboro.

and where there is no pronounced hereditary taint, the prognosis is usually good.

Treatment.—First of all treat and *remove the cause*; then with nutrition rebuild the impoverished and wasted nerve cells, and induce to activity all the various functionating cells of the body. Yet, treatment must not only be of the body, but of the patient's mind as well. This may partly be accomplished by pleasant surroundings, by cheerful companionship, by music and by out-door games, drives and other diversions, as the patient improves.

It is well to remember, that, in this disease, we have more or less degenerative changes occurring in the nerve cells, admittedly due to irritation and starvation—no matter what the primary cause may have been—and a loss of tonus, with a perversion of certain functionating cells.

Just what changes take place in the internal secretions, or the role they play in this trouble, is not known. We do know, however, that the whole human economy becomes erratic, and that there is apparently a pathological reciprocity between the sensitive brain and the whole perverted and diseased digestive tract.

Physical exercise, or work, is necessary to the proper performance of the functions of the body—a fact that escapes most people—as it increases respiration, circulation, oxidation and elimination; hence, exercise, graduated from passive to the most active, is of the utmost importance in the treatment of neurasthenia.

That the waves of sunlight have a powerful curative influence in the treatment of disease, is recognized, and it should be used in the treatment of all cases of neurasthenia—sun baths being especially beneficial. As soon as possible, patients should be kept in the open air, where the oxygen, so necessary, may be obtained in sufficient quantities.

The patient must make every effort to get well, for this is a disease where self-help is of the utmost value.

Cases due to alcoholism or chronic narcotism should be treated for those habits and their baneful influence removed. In women where the disease is due to lacerations, malpositions, etc., surgical intervention should be insisted upon, as a cure is impossible so long as the primary cause exists.

Persons who have suffered with neurasthenia should for some time live the "simple life" and avoid the rush, noise and worry incident to city life; should be careful and moderate in their diet, should avoid excesses of any kind, have regular habits, and should take plenty of exercise in the open. The patient should have sleep—and plenty of it. At the beginning of the treatment he must have *absolute rest*—mental and physical. Massage in the morning, followed by a sponge bath and an alcohol rub, are very invigorating and should be employed. Later, as the patient improves, he should be given the cold douche. Electricity in the form of the static, or mild faradic current, applied particularly over the spine, soothes the nerves and aids the cure by stimulating cellular activity.

Weir Mitchell's system of treatment may be used in the worst cases. High irrigation of the colon is useful in suitable cases. Both the hot and cold pack are very beneficial, used according to indications; the hot pack being one of our best remedies for the intractable insomnia which is present in these cases.

As hypernutrition is an end sought for, the patient should be fed often of easily digested or predigested liquid food. Milk, egg albumen, meat soups, etc., should be used at the beginning, followed by more solid food as the digestion and general condition improve. Fruit juices are also of much benefit.

All the eliminating organs must be kept active by appropriate remedies. This is one disease where suggestion—either simple or hypnotic—often gives most brilliant results; but it must be used tactfully.

A mild but invigorating climate, change of scenery, sea baths or a sea voyage, are all of great utility in the treatment of neurasthenia.

As to drugs, I find the glycero-phosphate of calcium and strychnia nitrate to be the best builders, while the compound syrup of hypophosphites is a close second. I give the glycero-phosphate in three grain doses.

It is well to give a good mercurial purge at the beginning of the treatment, and the bowels afterward should be kept open by laxatives. Phosphate of soda and cascara are excellent for that purpose. Where there is much gastric irritation or catarrh, lavage with the stomach tube should be employed. The nitrate of silver pill (1-8 grain) may be used for the same trouble. Iron and arsenic may be given with benefit—the peptonated preparations of iron being best.

Salicylate of soda, or some of the laxative lithia salts may be used to eliminate the uric acid and to relieve pain. Trional, or other of the ethyl-menthyl-sulfone compounds, may be used where an hynnotic is imperative.

Patience and perseverance are necessary to obtain results.

I may add that I have found the sulphocarbolates and creosote to give efficient service in the fermentation and diarrhœa incident to this disease.

The Annual Oration—The Influence of Psychic Phenomena Upon the History of Medicine.*

By Benj. K. Hays, M. D., Oxford, N. C.

Gentlemen of the Medical Profession of North Carolina; Young Ladies of the State Normal and Industrial College: Ladies and Gentlemen:

It is needless for me to tell you that I count it a great honor to be permitted to address you upon this happy occasion.

Nor do I hesitate to affirm that I deem it a far greater privilege to speak to the young ladies of the State Normal School than to the Medical Profession of North Carolina.

Not because of greater wit, beauty or learning on the part of the ladies. Not because of native gallantry on my part. My reason is far different from that.

The men who are gathered here this evening are, many of them, old enough to be my father. They are fixed in their ideas and in their ideals, and no words of mine can change them one iota.

The work of a doctor at best is but patch work. Every patient may be likened io the flame of a tallow candle flickering n the wind. If the doctor, by his skill, can keep it from being blown out, in a short time it will burn down and die of its own accord.

But the young woman who expects to become a teacher—and in the broadest sense of the word every educated person is a teacher—the woman whose life work is the dissemination of truth, will exert an influence, not only upon those about her, but upon generations yet unborn.

History records no crime, no pestilence, no famine, no scourge of any kind that cannot be traced to ignorance.

We have not yet thoroughly emerged from the dark ages.

Only the dim morning twilight has broken upon our vision; and the institution that is sending out over the land intelligent young women whose avowed purpose is to carry light into dark places is the most beneficent gift that Almighty God has yet bestowed upon a people.

Some years ago a correspondent of The News and Observer advocated the name of the President of this institution for Governor. And I said what a mistaken idea of duty; there are a thousand men in the State who would make us an acceptable Governor, but there is but one man in North Carolina fitted to be President of the State Normal and Industrial College, and that man is Dr. Charles D. McIver.

Recognizing as I do, the unseen influence of the teacher, the wife and the mother to build up or tear down a commonwealth, I declare unto you that in your future career is locked the destiny of North Carolina.

Your united efforts would make possible any dream of glory which you have for your native State, and if I can persuade you to take to heart the simple message which I bring tonight, I believe that through you great good will be accomplished.

Your patient attention, therefore, is desired while I make a brief inquiry into the relative claims of two classes of beings who profess power over disease.

One class is composed of regular physicians, such as are gathered here this evening; the second is composed of that host of medical pretenders, represented all over this country by such people as the Homeopathist, Osteopathist, Spiritualist, Faith Doctors, Christisn Scientists, Advertising Specialists, Quacks, Charlatans and the makers and venders of patent medicines.

It cannot be said that these people are necessarily bad; nor that they are ignorant or insincere.

The question which I present for your consideration is this: Are all, or is any one class of them worthy of the confidence of a community?

Are the members of the medical profession worthy of the confidence of a community?

In what way does the ethical physician differ from all other claimants of power over disease?

To answer these questions we will review briefly she history of medical cults; we will undertake to account for their seeming success; and conclude by contrasting them with such men as are gathered here this evening, whose lives are devoted to scientific research, and to the alleviation of human suffering.

Primitve Medicine.—Among all primitive people the office of priest and physician has been the same.

The medicine man of the North American Indian corresponded with a class in South America described as "priests, jugglers and physicians"; in Africa as "doctor, priest and witch finder"; and in Siberia as "magicians."

A more advanced stage of society was exemplified by the Druids of ancient Britton, who were ministers of state, priests and physicians, and by the Magi, who were the members of the learned and priestly cast of ancient Persia.

This unity of function of priest and physician is explained by the fact that all dis-

* Read before the recent meeting of the North Carolina Medical Society at Greensboro.

eases were thought to be due either to the anger of the gods or to demoniacal visitations. And as the priest had power to conciliate the gods and to combat the influence of devils, what more natural than that the sick man should be intrusted to his care.

Were a man suffering with typhoid fever, pneumonia or consumption, he was thought to be conjured, bewitched or his body possessed by a devil, and the only known remedy was exorcism by the priest.

Even when a drug was administered, whose effect was observed to be very powerful, its action was attributed to the spirit which resided in the plant being transferred to the patient.

Egyptians.—"The medical practice of the Egyptians was founded upon incantation and astrology. They divided the body into thirty-six parts believing in an equal number of demons, to whom those parts were intrusted, and to invoke whose aid in sickness was the principal duty of the physician, each spirit being called upon to cure his own peculiar portion."

The Hebrews.—The ancient Hebrews possessed rare knowledge of preventive medicine, as is made clear by reading the Mosaic law; yet when disease appeared it was often attributed to supernatural causes and in the case of Asa, who consulted a physician in preference to a priest, the priestly scribe records with pleasure that he "slept with his fathers."

Scientific Medicine.—Scientific medicine had its origin among the Greeks. They were the first people, so far as we know, who attributed diseases to natural causes. Their medical practices were well abreast of their other scientific attainments; and when glorious Greece bowed her head in subjugation to material Rome, the progress of medical science was checked for nearly two thousand years.

Among the Romans the medical practice was usually in the hands of Greek slaves; and after the fall of Rome the torch of knowledge was kept alive for us by the Arabians and the Jews.

Medical Cults.—In Christendom the history of medieval medicine is simply a history of superstitions and of cults. And though men boast of the light of the twentieth century, we are today surrounded by superstitions and by cults for which there can be no more logical defence than for witch-craft, astrology and the black-art.

It would be impossible in the time allotted to me to give even the names of the various schools of quackery that arose and flourished in Europe in the dark ages. Only a few will be mentioned, and these, not because of our interest in them, but that I may the more forcibly impress upon you the pernicious practices of the charlatans, dupes and religious fanatics of our time.

Invocation of Saints.—The early Christian church would not permit its members to consult a physician. The fathers lived in filth, priding themselves upon going a a long number of years without taking a bath.

Instead of learning from the writings of Moses that disease was due to contamination, it was thought to be due to divine wrath, and naturally the remedy was sought in prayer.

The aid of the saints was invoked, and, as with the Egyptians, certain saints were thought to exercise a special influence over certain diseases: thus, St. Vitus cured chorea, or "St. Vitus' dance;" St. Anthony cured erysipelas or "St. Anthony's fire;" St. Martin cured drunkenness or "St. Martin's evil." In this way the names of thirty-one saints have entered into modern medical literature.

Astrology.—We must pass over astrology, necromancy, magic and the black-art practices that were early introduced into Europe from the East.

Each had its influence upon medicine; each tended to retard scientific research; and the votaries of each used the same argument to combat truth that is used by the ignorant and credulous today, namely that the teachings of science are contrary to the Bible, hurtful to religion and atheistical in their tendencies.

Even now men have not learned of God that "Though he thunder by law, the thunder is yet his voice."

Alchemy.—In the wake of the astrologer came the alchemist, seeking a universal solvent, the philosophers stone and the elixir of life.

These men were not always physicians, yet they profoundly affected the medical practices of their time.

Insanity.—The history of insanity is of especial interest.

From earliest times, to almost within the memory of living men, insane people were thought to be possessed with devils. As a result of this belief the treatment not only did not tend to affect a cure but actually caused insanity to spread.

Prolonged attacks of hysteria have a tendency to produce insanity, and hysteria is highly contagious. Ever and anon great epidemics of hysteria have swept over Europe, and at times have been fraught with fearful consequences.

Whole towns have been so affected that every inhabitant appeared to be raving men. The children's Crusade of the year

1212 was an hysterical expedition that cost many thousands of lives.

It is not rare for men of great intellectual power to become insane on some one subject, and persuade simple minded people that they are inspired. Swedenborg was a striking example of this. George Fox, the founder of the Society of Friends, was a great and good man, yet a pronounced psycopath, and Alexander Dowie and Mrs. Mary Baker Eddy, of our own time, belong in the same category.

Not more than a century ago an English woman, when sixty-five years of age, created a widespread belief that she was about to become the second mother of Christ.

Witch Craft.—The history of witchcraft, with its attendant evils is familiar to all. It has been estimated that no less than nine millions of people were burned for this supposed crime. And since witches were thought to cause various forms of sickness, how fearful must have been the ravages of disease when no other means were employed to check its spread than the persecution of these innocent victims.

It may seem strange that James I, to whose enthusiastic love of learning we are indebted for our English Bible, should have written a book in the defence of the belief in witch-craft. But if you will take the trouble to compare this work with Mrs. Eddy's "Science and Health," you will find more learning, more logic, fewer contradictions and less tom-foolery in King James' Demonology than in "The Key to the Scriptures" of the modern Christian Scientist.

"King's Evil."—One of the most wonderful curative agencies recorded in history was the touch of the English Kings. It was thought to cure many diseases, chief among which was scrofula, or "King's Evil."

The practice began in the time of Edward the Confessor and continued up to about two hundred years ago. The evidence in favor of its efficacy is simply marvelous. Priests and physicians who lived in the noon-day glare of Elizabethan culture, agreed that to question the power of their queen to cure scrofula by the touch of her finger was to question the evidence of their own senses.

Were Mrs. Eddy to but read of these cures she would turn as green from jealousy as the milk in which a mad stone has been boiled.

Talismans.—A medicinal agent which is still in use among ignorant people was introduced into Europe by the returning Crusaders. It was the use of magic stones or talismans.

Readers of Scott will remember his novel, "The Talisman," tells how Richard the Lyon Hearted, was cured of a fever by Saladin, and the stone employed is said to be still in existence.

These stones were formerly employed to cure snake bite, but the juice of the Indian maize, discovered by Columbus, has in recent years become such a popular remedy that talismans are now limited to the cure of hydrophobia.

Polypharmacy.—But one other mediæval practice, the shadow of which still hangs over us, will be mentioned. It is that, which in our day, is called polypharmacy; the mixing in one dose of a large number of drugs, often of a most disgusting nature, and given for the most absurd reasons. It is interesting to examine the formulae of these old prescriptions, some of which are still in use. Many of them are not one whit less absurd than the witches broth of Macbeth which contained:

Fillet of a fenny snake,
Eye of newt, and toe of frog,
Wool of bat and tongue of dog,
Adder's fork, and blind worm sting,
Lizzard's leg, owlet's wing,
Scale of dragon, tooth of wolf,
Witches' mummy; maw, and gulf,
Of the ravin'd salt-sea shark;
Root of hemlock, digg'd in the dark:
Liver of blaspheming Jew,
Gall of goat and slips of yew,
Silver'd in the moon's eclipse:
Nose of Turk? and Tarter's lips;
Finger of birth-strangled babe,
Ditch delivered by a drab,
Make the gruel thick and slab:
Add thereto a tiger's chaudron?
For the ingredients of our cauldron.

Through all this maze of ignorance, and superstition, from the days of Hippocrates to the present time, there have been men who have conscientiously pursued the study of medicine along scientific lines. But they have ever found the time out of joint, and their silence has often been that of a martyr's grave.

There was a common expression in Europe that where you find three physicians there are two atheists, but when we remember that it was counted atheistical not to believe in witches, demoniacal possessions and the manifestation of divine wrath in disease we may well question if these so-called atheists did not in reality have a higher conception of deity than the howling fanatics who sought their ruin.

Nineteenth Century Cults.—At the dawn of the nineteenth century the medical slogan was "puke, purge, bleed and blister," and fortunate was that patient who escaped this quadrated ordeal.

The death of Washington, which it will

be remembered occurred in 1799 is now thought to have been hastened rather than retarded by the treatment which he received.

From this condition of affairs a reaction was inevitable, but as usually the case, the reactionists swung further from the truth than those whose error they sought to correct.

Homeopathy.—It was in 1796 that a German physician by the name of Hahnemann announced to the world a new system of medicine, known as Homeopathy.

His doctrines were three. 1st. That chronic disease is the result of a humor in the system, which, when it finds its way to the surface, causes the itch. 2nd. That the more you dilute and shake a drug the more powerful it becomes.

These two doctrines have long since been repudiated by his disciples.

The third oracular utterance of Hahnemann did not originate with him, but has come down to us from Hippocrates.

It is the familiar "similiar similibus curantur," which is still the battle cry of the Homeopaths. This dictum is without scientific value, but it sounds well, and being rendered in Latin gives an air of learning to him who uses it.

For a time the school of Homeopathy flourished, but today it is on the wane. Where a physician advertises as a Homeopathist it is for one of two reasons. He is either too ignorant to be admitted into the ranks of scientific medicine, or he wishes to use the word Homeopathy as a trade mark to catch the eye of persons prejudiced against ethical physicians. The advertising pages of their journals are filled with the names of standard remedies.

In the latter half of the nineteenth century we have seen the development of the patent medicine business; the birth of Christian Science; the rise of Osteopathy, and the appearance of pseudo-schools, cults, quacks and charlatans too numerous to mention.

Patent Medicines.—The American people spend over one hundred million dollars yearly for patent medicines. It is safe to say that the great mass of this product is harmful to the person who uses it. It contains alcohol, opium, cocaine or other hurtful drugs. Much of it is inert, doing neither good nor harm, while a small per cent is probably of actual benefit.

Every thoughtful person knows that the patent medicine business is pernicious, but public opinion in this country is controlled by the press; and since the patent medicine men pay large sums for advertising, we cannot expect the daily papers to wage war upon their best customers.

One of the most healthful signs of the times known to me is that some of the leading magazines in the North refuse to publish patent medicine advertisements.

The most hurtful literature in this country today is the patent medicine almanac. Eibert Hubbard has truly said that their object is not to tell men what will cure their diseases, but to remind them that they are sick.

Faith Cures.—Contrast the teachings of the Christian Scientists, who deny the existence of matter, with that of the Osteopaths who attribute all disease to the dislocation of some bone, muscle or other tissue.

How are we to account for the success of such widely varying schools? The answer is clear. It is but the universal application of the law of faith cure.

No matter what the agent or who the physician the one essential to success is faith on the part of the patient.

By faith, men swallow cart loads of patent medicines and believe themselves cured of diseases they never had; by faith, the mother gives her infant the harmless powders of the Homeopath, while nature restores the child to health; by faith, a man with pneumonia sends for an Osteopath, has the vasso-inhibatory nerves of his lungs stimulated by massage, and receives benefit from the hope engendered; by faith, neurasthenic men and women have their minds diverted by Christian Scientists, and straight way their imaginary pains are forgotten; and the underlying principle of all these cures differs not one iota from those accomplished by the Indian medicine man or the naked savage in Equatorial Africa.

Let an agent be

A spirit of health or goblin damned,
Bring with it airs from heaven or blasts from hell,
Be its intents wicked or charitable,

if it but command the faith of the patient beyond all question its tendency will be to affect a cure.

In this way every cult, quack and faith curist can obtain countless testimonials. It is but necessary to find a patient. Let his disease be real or imaginary. Persuade him that the remedy employed will effect a cure. Nature is already working toward that end, and the hope engendered will hasten the happy result.

Straight-way a certificate is given of cancer or consumption cured. The patient did not have the disease of which he claims to be cured, nor does the attendant know what he did have.

This method of practice is going on about us all the time.

The quack is sometimes ignorantly sin-

cere, more often he is an open fraud. He is not familir with the laws of health, he has not studied the nature of disease, and he cares nothing for the good of the patient save in so far as it affects his own pocket book.

The Ethical Physician.—And now, in contrast, let us note the claims of the ethical physician.

The Medical Profession, before admitting a member to its ranks inquires into his moral character. He must be educated, and must have passed through a course of training, lasting through a period of years, at a regular medical college.

His qualifications must then be passed upon by an austere board of medical examiners.

To remain in good standing in the profession he must devote his entire time to the study and practice of one or more of the various branches of medicine. He must treat his professional brother with fairness, and must not keep secret any remedy known to him whereby disease may be combatted.

With the best ideas of all the past ages concerning the nature and cure of disease, he is presumed to be familiar, and of new and valuable discoveries in medicine it is his duty to keep informed.

When called to the bedside of a patient the physician believes that he should and does know better than any one else the nature of the disease with which he has to contend, the remedies indicated, and the proper means of their administration.

Yet, how rarely is it possible to take any patient through a serious illness without finding him advised by a host of well meaning but misguided friends.

Each is positive that the agent or remedy advised by him will effect a sure cure. These advisers have not studied the disease with which the patient is suffering, nor do they know what would be the effect of the drug which they advise. Moreover, as a rule, you will find that they are people who would not be one of a company of thirteen; they would not set out on a journey on Friday; they would not leave an infant in the room with a cat for fear that the cat would suck the baby's breath; and it is in no spirit of idle jest that they carry in their pockets the "left hind foot of a grave yard rabbit."

My friends, my condemnation is not of individuals, it is of ignorance. My plea is not for the medical profession, it is for humanity.

The contrast to which I would call your attention is a contrast between truth and falsehood, between science and superstition, between knowledge and ignorance.

I do not ask for a more liberal support of the medical profession, but that men may be instructed in nature's laws that disease may be prevented rather than cured.

Teach men the value of pure air, pure water and pure food; of rest and of exercise; of change of environment; let them never forget that cheerfulness is contagious, and is characteristic of angels, while a grumbler is the devil's own partner. Teach men to think pure, healthful, God-like thoughts, and you will create—not a demand for more physicians—but a condition in which the medical pretender can find no place in our civilization.

The Claims of Each Class.—And yet, in spite of all precautions, we know that some diseases will continue to appear in our midst.

When medical aid is required, whom will you employ? the man whose photograph appears at the head of his column advertisement, but who has not seen you and knows nothing of your condition? the man who has recently appeared in your community as the exponent of the latest medical fad; whose name is ever on the lips of a few hysterical women, but of whose ability you have no valid evidence? the widely advertised secret remedy recommended by a friend who knows neither the nature of your disease, nor of the remedy advised? the religious fanatic, who proposes to cure your every complaint by prayer, even though you are ignorantly or willfully violating the eternal laws of God? Will you go to those who have no power over disease, save in so far as they pander to the morbid imagination of their patient; or will you go to the trained and tried physician who is at once your neighbor and your friend? who has shown himself worthy of every confidence, and has devoted years of labor to the study and practice of medicine, and has stood for everything in your community that makes for civilization and enlightenment.

A Personal Incident.—At the beginning of the Civil War there went from the State of Virginia a seventeen-year-old boy. He was in the battle of Bethel, at which the first blood was shed.

First a member of the Halifax Light Infantry, he afterwards became one of Armistead's men of Pickett's Division.

He was in almost every important fight that occurred in the State of Virginia, and distinguished himself for bravery early in the war.

Wounded at Malvern Hill, he was in the ranks again when Pickett reached Gettysburg. When the opposing armies were drawn up facing each other, the town of Gettysburg was in the hands of the enemy.

It became necessary for Pickett to communicate with some one in the town, and he looked about him for a trusty courier. His eye fell upon this boy. The General placed him upon a horse; gave him a packet of papers, and started him down a road on either side of which was encamped a Yankee army. Soon a volley of musketry was turned upon the boy, and the smoke obscured him from the General's view. When the smoke had cleared away, and it became evident that the boy had not fallen, the General, watching through his field glasses began to await anxiously the boy's return. Soon he emerged from a side street; his head was bowed upon his horses neck, and horse and rider were moving at full speed. A few random shots came from either side, and then both armies ceased firing and began to cheer. The heroic spirit of that boy had touched the hardest heart in the "enemies lines. Three days later that boy was in Pickett's famous charge up Stone Hill. Twenty paces from the wall he was shot down. He crawled from the battle field and made his escape. With one arm crushed, and carried in a sling he helped to defend the wagon train of the retreating army. In the ranks again at Spottsylvania Court House he was taken prisoner, and confined for more than a year at Fort Delaware.

When liberty was offered him, he was one of the few men who would not take the oath of allegiance until he was absolutely certain that there was not a Confederate soldier under arms.

When this boy returned to his beloved Southland he read medicine, and located in Granville County, of this State.

For thirty-five years the same heroic spirit that was shown on thirty-five battle fields has manifested itself in the devotion to the practice of medicine. Time and time again, to reach the bedside of the sick and suffering he has faced the night and storm, wind and rain, hail and sleet. He has been swept down the current of swollen streams, capsized in the mud, lost in the woods, beset by highwaymen, deprived of meals, and yet "alert from the wells of sleep" has carried hope and bouyancy into the sick room wherever he has gone. And this man, who is but a type of the true Southern physician; who has done no more for suffering humanity than thousands of others have done, are still doing and will continue to do in the future; this man who has answered the cry of the widow and the orphan in the same spirit with which he answered his country's call to arms, this man, has not gone to his eternal reward, but is none other than my old friend, Dr. Samuel D. Booth, who is now sitting in your midst.

And now my friends, let me beg of you that you will consider every patent medicine known to you; every Homeopath, Osteopath, Faith Curist, Christian Scientist, quack and charlatan; let your mind run the entire gamut of claimants of power over disease, and weigh them in the balances with the names of O'Hagan, Grissom, Strudwick, the elder Payne, J. W. Booth, Wood, Thomas, Pittman, Cheatham and Tucker, and tell me which of these two classes of beings is most worthy of the confidence of a community.

The Physician and the Public.*

By John Hill Tucker, M. D., Henderson, N. C.

Mr. President, Ladies and Gentlemen:

In an hour of well nigh desperation, attempting to find a subject for a paper, and believing it should be one of passing interest alike to the laity and the profession, as it was presupposed to be read before a mixed audience, some attitudes of the public towards the physician that have annoyed and perplexed me through a short professional experience came to my mind.

In the first place, what is the right relation that should exist between public education and the medical profession?

Possibly there is no physician so young or of so limited experience in dealing with his fellow men as not to have been chagrined at one time or another by an attitude of careless indifference on the part of many people who should know better towards the great truths of modern medicine and surgery. It takes, indeed, but a short excursion from our offices or homes out into the world to hear of the wonderful cures wrought by a nostrum of unknown formula after every available doctor had been consulted and failed to relieve or cure. It may be, we hear of scores of people who were either killed, lost their arms, or left to go through the remaining days of life in misery and suffering as a direct result of vaccination. Or, as the writer, on a smoking car a few weeks ago, listened to an animated discussion of appendicitis by four apparently good natured and intelligent traveling men, when much to his surprise they all agreed that no one ever entirely recovered from an operation for appendicitis, and that they would certainly be operated on only as a last resort and not as a mere means of gratification to the surgeon; forming their opinions and basing this astounding conclusion upon the fact that two of their

* Read before the recent meeting of the North Carolina Medical Society at Greensboro;

number had had friends to die within a year after being operated on.

In fact, on every side can be heard the absurd and inconsistent claims of a varied army of professing healers, and often are we called upon to witness with compassionate sympathy the abused trust of many a deluded follower.

In this day of universal effort to find and teach the truth naked of mediaeval superstition or of modern fanaticism, and disrobed of that dangerous and deceptive cloak of false modesty which has too long been a potent means of infecting the veil of our civilization, it seems appropriate on this occasion to urge the necessity of teaching each succeeding class in public schools and colleges the causes and prevention of diseases. Especially appropriate as we assemble in this beautiful auditorium of one of North Carolina's most progressive schools, made so by its President, one of the South's greatest educators and benefactors. For after all has been said, is there any knowledge more important to mind, body and soul, aside from its vast economical phase, which appeals so strongly to our commercial age than a knowledge of the laws governing health and the prevention of disease?

The burden resting upon our profession to spread abroad this knowledge is granted without question, and becomes the chief duty and pleasure of its most loyal members. Yet my friends, it is but fair that this great responsibility should be felt with equal weight by others, among whom are the public teachers, who are in the largest measure the guiding influence for good or evil in the State.

The unaided profession may cry from the house-tops to all that pass by, and still in the far distant future the high ways of the world will be crowded with doubting Thomases working unceasingly to teach false doctrines, the very seeds of which were sown broadcast in a young mind by a much revered teacher.

Possibly no where else can preventive medicine be given a greater impetus than in our public schools, where for the first time the boy or girl gets away from the faithful watchers of home and is fresh to take on to things new. There is the place and then is the time when unbiased by prejudice the young mind should be taught the causes and prevention of diseases that may fasten their deadly clutches upon them at any stage of an useful life. Impressions there made, unquestionably when true, will abide with them through all the arguments to the contrary which they may encounter in after life. There can be taught that rather than one in ten dying as a result of vaccination, that an official report to the German government a few years ago reported 2,485,483 vaccinations without a single death.

That notwithstanding tuberculosis has for nearly a quarter of a century been recognized as a communicable disease and distinctly preventable, the ghastly fact remains in our midst told so graphically in the somber words of Osler: ("In more than 400 homes of this country there are lamentations and woe to-night—husbands for their wives, wives for their husbands; parents for their children, children for their parents. A mere repetition of yesterday's calamities! And if the ears of your hearts are opened, you can hear, as I speak, the beating of the wings of the angels of death hastening to the 400 appointed for to-morrow. That this appalliug sacrifice of life is in a large part unnecessary; that it can be diminished; that there is hope for the poor consumptive; this represents a revulsion of feeling from an attitude of Oriental fatalism which is a triumph of modern medicine.")

In our public schools the future husbands of innocent girls can be taught in the days of their youth the rewards of purity and the unutterable horrors of those foul diseases which a vile and cruel standard of morals, recognized by society, allows to go unchecked as an open sewer in our midst, until yearly hundreds of noble and pure young wives, through no fault of their own and not infrequently through ignorance of their sworn defenders in the martial vows, are reduced to hopeless invalidism and doomed prematurely to the grave.

Let us give the mothers and fathers of the next generation a sufficient knowledge of the social evil, the cause of such widespread sorrow, suffering and disease, probably second to no other cause, as to enable them better to warn and protect their innocent children from the gloomy fate of those poor suffers who line the wards of hospitals with faces pinched and drawn, and who by days and nights of suffering are rendered unfit for the duties of that blessed state of motherhood.

When the manhood of our country knows of the cause and the train of sad sequalæ following such diseases, they will be found in the advance guard of a war against vice and crime, against their helpless wives and innocent children; demanding as did the venerable prelate in the story when asked for the hand of his daughter in marriage by a man of wealth, family and influence: "I know you can provide for her future needs; can you protect her from the past?"

When these facts are known of all men, let us trust that forevermore there will be an end to a state of society which fails to

say no to a man who from a life of sinful debauchery aspires to enter into our purest homes.

There can be taught the blackness of the crime, the most degraded crime against state, church, family and body—"Racial Suicide." The very air of our larger towns and cities is chillen and laden with these murderous desires and intents, and often through ignorance such advice is given in a spirit of Christian charity and mercy, when in fact it reeks with disease and death.

Let us briefly consider other relations of the physician and the public. How often we hear, I don't believe in doctors and their medicines. Now to teach or claim that the physician is always right and in some providential way exempt from error and mistakes would be as false and treacherous as it would be to teach that nothing of a lasting or beneficial nature had been added to the store of medical knowledge within the last half century of brilliant research and marvelous advance, so that the dawn of each new year notes the gradually ascending scale of the length of human life, which within that period statisticians tell us the duration of human life has been advanced from 28 and below to 41 years and above under the ordinary workings of sanitary laws and the phenominally reduced mortality in many diseases both surgical and medical.

However attractive to the sick and suffering are the boasted powers of the Christian Scientists, the Osteopaths, the Divine Healers, and a nameless host of others to relieve suffering and cure disease, there will always remain the unrefuted truth that there is but one profession of medicine. Yes, but one profession whose unselfish end it is to prevent as far as possible suffering and disease, and when unpreventable, to carry to the afflicted the relief that has been won and offered freely to all mankind by many of the world's greatest benefactors through lives of obscurity and self-sacrifice, and years of patient study.

The fact that there has been of recent years such rapid and radical changes in the treatment of diseases, that often the avowed and strongly supported methods of yesterday are questioned to-day, seems strange and almost unreconcilable to some, whereas it only goes to prove that medicine is a progressive science, cautious, but ever ready to welcome the true reformer.

So great have been the changes that a few months ago a bewildered old man startled by the liberal diet, quantity of pure water, fresh air, cold baths and few drugs given in a case of typhoid fever, remarked: "Doctor, they have certainly changed the treatment in fever. Why when I was a boy they used to bleed them till they fainted, and then give calomel and jalap till they died."

It is of doubtful propriety that the laity should know too much of disease per se, for it is a hackneyed story of the medical student who was unable to pursue his course in medicine, as he imagined himself to be afflicted with every disease he read of, doubtlessly abandoning his studies with the popular American disease—nervous prostation—and so it might prove fatal to many.

Still it is of the greatest moment that each individual should have a larger and clearer knowledge of the causes and effects of diseases, and of the urgent necessity of consulting a physician in the beginning of ill health and impaired normal functions, thereby gaining all of the benefits of an early diagnosis, the importance of which is being more and more realized by both physicians and surgeons; many of the failures of the present in the most common and closely studied diseases being directly and alone attributable to a late diagnosis, brought about either by ignorance on the part of the patient or careless indifference in the hands of the physician, whereby an almost incredibly short period of time may change a hopeful to a hopeless condition—in such common diseases as tuberculosis, diphtheria, appendicitis, obstructive jaundice, and the like.

When the public conscience has been aroused to a due appreciation of these golden moments in the very beginning of disease, before the progress of destruction and impairment of vital functions have made the conditions unfavorable for the application of remedies, which at an earlier stage would have assured the patient of a speedy recovery, spared him probably from weeks of suffering and many dollars of the savings, which the very effort to accumulate and lay aside for the peace and comfort of old age was in so large a measure responsible for his beginning ill health; then will be seen the first light of the dawn of the approaching day when the great masses of working men and women will realize how they have been imposed upon by every adventurous imposter who has been mean enough to widely advertise some patent medicine or nerve tonic as a means of enriching himself by taking the hard-earned pennies from the homes of the poor. In return for which he has flooded their homes with literature often gangerous and obscene to poison the minds of their children while he poisons their bodies with vile concoctions and robs them of every chance of recovery.

The bill for patent medicines and preparations of that class in this country amounts to between 70 and 80 millions of

dollars annually, coming largely from the pockets of those who can ill afford it.

A few months ago I was called in to see a poor girl, who up until two days before had been working faithfully in a cotton mill through days of pain and fatigue in an honest attempt to support herself and aged mother, with no idea that she had far advanced consumption, and for six months had starved herself and spent $50 of her little savings in patent medicines recommended to her for indigestion. Seven weeks later as I looked upon her lifeless form and beheld the loneliness of her sorrowing mother, I wondered where could be found the reward of the man who furnished her those drugs.

Robbed of her petty earnings, thrown on the hands of charitable friends to be led to a bed of death; can you conceive of a greater crime against the children of men?

Many of these preparations, sold as harmless, are filled with opiates, cocaine and the like dangerous drugs, with the premeditated purpose of getting recommendations from people of influence while under the first and transient effects of feeling better.

Let some of our temperance societies in connection with their righteous war against alcoholic drinks, sold under the requirements of the law, consider the evil of this great hidden source of drugging and drinking, and they will render all classes of people a far greater service.

Heads of families who would shudder in holy horror at the thought of knowingly administering alcohol in any form to a member of their household, not infrequently buy and advise others to buy preparations ranging from twenty to forty per cent. by volume of alcohol; such as:

Lydia Pinkham's Vegetable Compound, 20.61%; Paine's Celery Compound, 21.00; Ayer's Sarsaparilla, 26.20; Peruna. 28.59; Parker's Tonic, (purely vegetable) recommended for inebriates, 41.60; Hostetter's Stomach Bitters, 44.30., which are but a few of the long list.

Lastly, what is the relation that should exist between the family and the physician?

There is a tendency in this unique age to specialize in every phase of life—in literature and in business, in music and in philosophy, in law and in medicine, and well that it is so, for only through specialists are the highest attainments made possible. Yet, I share none of the morbid fear that either the specialists or the public will ever permit of the passing away of the family physician, upon whom the specialists must depend to get their cases in time, and the patients to be guided to the right specialists and surgeons.

With this knowledge of family histories and individual peculiarities; with a general knowledge of every organ in the body, and as a bedside observer in diseases he becomes a specialist of specialists, the first and last court of human appeal—for it is the family physician who is with you at your entrance into the world, warns you through life of approaching dangers, and finally soothes your pathway to the unavoidable end.

Symphysiotomy and Report of Case.*

By J. A. Williams, M. D., Reidsville, N. C.

In introducing this subject to the Society I will give a little of the history of this operation.

It was first done in Paris in 1768 by Jean Rene Segault, without any apparent results. It was also done by several of his adversaries a few years following this period. Then for the century following it passed into oblivion in France, Germany, England and America, except as a matter of historical interest, being upheld alone in Italy. Morisani a century later had the honor of presenting this operation again to its recognized place in the practice of obstetrics. Thus in 1881 he reported to the International Medical Congress of London fifty cases, which he had operated upon within the past fifteen years, with the result of saving the lives of forty-one mothers and forty-one children.

Still later Spineli reported having operated on twenty-four cases out of which he saved the lives of twenty-four mothers and twenty-three children. He demonstrated for the first time that a living child could be extracted at full term from a pelvis measuring not less than two and one-half inches, and without danger to the mother, under the proper antiseptic precautions.

In 1891 Harris brought forth the subject again in America, by an article read before the American Gynaecological Society, demonstrating the fact that under proper antiseptic precautions by this operation the life of a child might be saved without any apparent danger to the life of the mother.

In performing this operation it will be well to take into consideration that we may gain in facilitating delivery from two sources.

1. Is the increase of Sacro Pubic distance, or a gain in the conjugate axis of from a quarter to one-half an inch.

2. In the descent of the head; the segment of this part may occupy the space between the separated pubic bones, the result and gain depending upon the width in the gap between the ends of the bone and in the convexity of the child's head. In this operation it is also well to take into

*Read before the recent meeting of the North Carolina Medical Society at Greensboro.

consideration that forcible extension of the thighs increases the line of the superior straight, and that forcible flextion of the same with abduction increases the line of the inferior straight.

In reporting the case which I have to present to you I had no alternate or choice of operations between craniotomy, symphysiotomy and cesarean section, but had to submit to symphysiotomy solely on account of the law of environments.

Early one morning in May, 1904, I was called by a physician in consultation, to see a colored girl, who lived about five miles in the country. On my arrival I found that she was a girl of twenty three years, primipara, who had been in labor for twenty-four hours, having had quite severe pains during all this period, and having had repeated doses of strychnine and quinine. On examination I found the cervix well dilated and the head presenting, though not fixed. She apparently had a normal pelvis. I, therefore, without further examination waited after giving a hyperdermic of strychnine, with a repeated dose of quinine, and after seeing that she had several hard pains without result whatever, and after such severe contraction of the fundus, I decided to use the forceps and deliver her. These I applied quite easily and begun traction with each pain. I soon found that this was impossible as the head was hard and more or less ossified and all out of proportion to a normal pelvis, and on account of its ossification was impossible for the process of moulding to take place. Then I had the operation of craniotomy, ceaserean section and symphysiotomy, one of the three to present itself to me.

I found myself five miles in the country in a little single room log cabin, without the necessary instruments for craniotomy or caeserean section. The woman's pains were hard and she was becoming weak and haggard without any results whatever. I had a small pocket case, out of which I took a small scalpel, a silver catheter and a needle. After boiling these I placed the patient in a lithotomy position, and after being put under chloroform I introduced the catheter into the bladder and thoroughly emptied it. I then had the assistant to take hold of the catheter, as it remained in place in the bladder, and pull the whole urethra with the clitoris to the right side of the symphysis, then with a simple stick puncture of the mucus mebrance beneath the pubic joint with the point of the scalpel, and pushing it gently up behind the pubic joint, passing my left forefinger up behind the joint as a guide, until the blade reached the top of the back part of the joint, then turning the blade forward, I cut the inner part of the capsular ligament, bringing the knife from behind forward separating the entire joint. As soon as the cartilage and ligaments were cut through the pubic bones separated at least from three-fourths to an inch; the knife was withdrawn and also the catheter. I then allowed the patient to relax from the chloroform and with the first hard pain following, the child's head was born and delivery soon completed without any laceration of the soft parts whatever. After waiting about thirty minutes I delivered the placenta. The puncture of the upper vaginal wall beneath the pubic joint was only one-fourth of an inch in length and about one-fourth to three-eighths to the left of the median line; the parts being thus retracted to their proper position, after removing the catheter. In this puncture I simply took one cat-gut sutura to close the puncture. The patient was given a hot bichlorid duche, and a bandage made by folding a sheet, was fastened tightly around the hips to draw the two ends of the pubic bone together. The bandage was kept in place for two weeks, being occasionally changed. The patient was given a bichlorid douche of one to six thousand solution a day. She was kept in bed for six weeks before she was allowed to sit up. She never had to be catherized during this time, nor at any time did she have a rise of temperature. She is now strong and in good health and nursing for her occupation. The joint is firmly united without any impairment to walking whatever.

I report this case simply as one of interest. Craniotomy might have been indicated in this individual case as the child died soon afterwards, having a deformed head, becoming ossified, due to hydrocephalus. The measurements of the head were as follows:

		Normal.
Occipito-Mental	6½ inches.	5¼ inches.
Occipito-Frontal	5½ inches.	4½ inches.
Bi-Parietal	4½ inches.	3⅜ inches.
Cervico-Bregmatic	5½ inches.	3¾ inches.

These measurements alone show the head all out of proportion to the normal pelvis, the bones being hard and not susceptible to the process of moulding. I was left to operative procedure alone; the choice being due entirely to the environments and lack of instruments to do craniotomy, having only a scalpel and silver catheter with which to perform the operation.

As to matter of choice as to which should be done I think it should be left entirely to the individual case and the individual operator, as to which he can do best, quickest and with the least danger to the patient and child, saving the life of both if possible.

Puerperal Eclampsia.*

By Fletcher R. Harris, M. D., Henderson, N. C.

Every pregnant woman should be treated as a possible case for Puerperal Eclampsia. No physician should assume the responsibility attending a case of confinement unless he be furnished statedly with sample of urine and unless the patient will carry out his instructions as to diet, exercise, etc.

The proper treatment of Puerperal Eclampsia is to prevent it. This can be done in a great many cases; but, unfortunately, not in all.

Statistical tables go to show that Eclampsia occurs about once in 500 cases. If I may judge from my own experience, which extends over a quarter of a century, this estimate is far too low.

To prevent Eclampsia see that your patient takes outdoor exercise religiously. See that she is fed scientifically. (This varies with the case). See that she drinks water plentifully. See that her bowels are kept well regulated; in other words see that the emunctories are discharging their full duty and, I repeat, never fail to examine her urine statedly.

The attack may occur without warning, but usually there are premonitory symptoms which should not fail to put the physician on the alert.

If a pregnant woman has disturbances of vision or hearing, frontal headache, epigastric pain, oedema, scanty urine and especially if the urine contain Albumen and casts convulsions will surely come unless prompt means are used to avert them. When any of the above symptoms manifest themselves the patient should at once be put upon a restricted diet, or, better still, put her on milk exclusively for a while. Have her drink water freely—preferably, possibly, some lithia water. If the symptoms do not rapidly disappear give her a brisk purge of Epsom salts and stimulate the skin, etc.

If under this treatment the symptoms disappear, the albumen becomes less and the urea increased in amount, the outlook, ordinarily, may be considered good; on the contrary, if the albumen steadily increases, and the urea decreases and the symptoms remain unchanged you may look out for results! (For the danger signals are all up.)

Etiology.—It seems perfectly natural that our ancient brethren considered this a disease of nervous origin akin to epilepsy.

Lever in 1843 traced a connection between the epilepsy known to the accoucheurs and albumin in the urine, but seven years later Churchill calls all convulsions occurring in pregnancy and childbed epileptic, except a comparatively rare variety, apoplectic convulsions. He treats at length of the causes, but makes no reference to albuminuria under that head. Frerichs shortly after advanced the theory that the cause was the presence in the blood of carbonate of ammonia, derived from the decomposition of urea.

Its presence has been proven chemically. During the controversy, Traube advanced the theory that oedema and acute anaemia of the brain were the cause of the convulsions and coma, and therefore regarded eclampsia as resulting from changes in the cerebral circulation produced by hydremia, and considered the renal changes as merely contributive to, but not the original cause of the convulsions and hence not a necessary prelude to the same. He was supported in this by Rosenstein. This was known as the Traube-Rosenstein theory. Another theory was, local anemia of the great nervous centers produced primarily by an insufficient supply on account of the heavy demand from the pelvic organs, and their being still further starved by the impoverished condition of even that insufficient supply. Another theory, which had for a long time many supporters was that the disease of the kidneys to which eclampsia was thought to be secondary was caused by pressure of the enlarging uterus upon the ureters and renal veins. If this were the correct theory then we would have eclamptic seizures in cases of large deposits of carcinoma or tubercle or other tumor masses in the pelvis. In a paper on auto-intoxication, written some years ago by Bouchard, he showed that whilst the urine in health injected into the veins of an animal was strongly toxic, in eclampsia it was much less so, thus indicating the retention of such poisonous material in the blood and its non-elimination by the kidneys. There is an extraordinary cell activity going on through the process of gestation, both of mother and child, producing excrementitious substances greater than can be voided by the excretory organs, unless their activity is increased in the same ratio.

If these organs in the pregnant woman become inadequate to the disposal of this effete material, we have poisons of a nature not yet fully known stored up in the maternal system, until by the cumulative action, their presence is manifested by an eclamptic seizure.

Further, there is a plus activity of the nervous system in a pregnant woman as in a child, and of the vasomotor centers in particular.

*Read before the recent meeting of the North Carolina Medical Society at Greensboro.

The poison having accumulated in the circulation which is controlled partially by the vaso motor system, which is again under control of the nervous system, you see a cycle of circumstances which tend to bring about the results of the subject, varying according to the variation in stability and the inhibitory power of the nervous centers in different individuals, and also according to the amount of poison present.

This poison may be that of a uremia, acetonemia, ammoniemia, or microbic influence with resulting toxemia.

I will say frankly I do not know the cause of eclampsia. No one particular poison has been proven to bear a causative relation to eclampsia. I believe it is the result of a combination of all these substances found together with an unstable nervous system. (As scientiäc men we should never be satisfied until we have found the cause and then we can treat it rationally).

Treatment.—When the convulsion comes on, then the time to act is on, as well.

Get your patient as quickly as possible under chloroform. Send for assistance, but never wait for assistance or anything else, for the moments are now golden. I repeat, the moments are now golden.

See that your forceps are sterilized and be careful as to asepsis because these cases are peculiarly susceptible to infection.

With your patient anaesthetized, your hand clean, dilate the cervix without delay, but not with undue haste. Keep a cool head and a steady hand. Let your motto now be "Suaviter in modo fortiter in re."

By the time the cervix is dilated probably your assistant has come. Turn the responsibility of the anaesthetic over to him and deliver the child. When delivered remember that meddlesome interference is now criminal. Darken the room and keep everything quiet. If your patient is restless and threatened with another convulsion give her ½ gr. morphia hypodermically. (This is theoretically wrong but experimentally correct.) If she have a second seizure repeat your morphia (¼ gr.) and with a full bounding pulse use Norwood's Tinct. Veratrum hypo. 20 minims. p. r. n. until pulse is 60. Give her cathartic. Have her drink water freely and your patient will get well.

The books tell us that the mortality varies from 20 to 25 per cent.

If you will pardon me, I will say under the above line of treatment I am yet to lose my first patient when present at the time of the first convulsion.

Response to Address of Welcome.*

By L. B McBrayer, M. D., Asheville, N. C.

Mr. Chairman:—To me has been assigned the difficult, not to say impossible task of expressing to you in words the emotion of our hearts at the kind, cordial and eloquent words of greeting that has just fallen from the lips of the learned Dr. McIver, and the fluent Mr. Brooks, speaking for the profession, the chamber of commerce and the citizens of your city. And on behalf of the officers and members of the North Carolina State Medical Society, it is my pleasure, privilege and honor to say, we sincerely thank you.

We have heard it said that your city is called the Gate City to the Piedmont Section, and we have understood that some of your enterprising real estate men and perhaps others, claim that it is the Gate City to the world; and states in substantiation of these claims, that the great Southern Railway connects it with the coast cities on both sides of the continent. Am sure I am not here to dispute these claims.

Again I have heard it said that your city is an educational centre. From the number of colleges and schools, from your excellent graded school system, from the fact that you were the first city in the State to vote a special tax for your public schools, from the large number of students who come here from all over this, and from other States, and especially from the intelligence, culture and refinement of your citizens, we are prepared to believe that your city is an educational centre.

We have heard it claimed that the morals of your city are of a very high standard, and judging from the many church edifices and the beauty of their architecture, and from the fact that your people drink nothing but pure water, and from what we know of the personnel of your citizens, we are prepared to believe every word of it.

We have heard it claimed that your city is a manufacturing centre; and judging from the wood, iron, metal, cigar and tobacco, terracotta pipe, textile and many other kinds of factories seen on every hand, we are prepared to believe it.

From the number of your hospitals, and the renown of your physicians, we could easily believe your city a medical centre. We have heard it stated that your city is a convention city, and I am prepared to believe this from your excellent hotels and from the testimony of one of my Raleigh friends who, when he heard me make that statement, winked his other eye and said to his colleague, "and that's no lie."

* Delivered on behalf of the North Carolina Medical Society at its recent meeting at Greensboro.

It is said that for a short time after the cruel devastations of the Civil war had laid in waste the fortunes and property of your people, they were unable to build fine business blocks, great factories or palatial residences as they do to-day, but through it all they retained their love for the beautiful, and every yard became a flower garden where rich colors, rare perfume and variegated form united to welcome and delight the visitor; and from that sad time to this glad day you have been called the city of flowers. And from the glad welcome nodded to us by the bowing daffodil, wafted to us by the morning zephyrs from the sweet scented violets, and chanted to us by the ruby lips of the blushing rose, we are prepared to accord you the distinction of being called the city of flowers.

Yes, the name and fame of your fair city is being heralded throughout the length and breadth of this broad land of ours, and has even been heard by that unknown people the mountain whites, who dwell in that remote region, in that sequestered nook called, in these later days, greater Asheville, and we were not surprised at the hearty welcome given us when we entered within your gates.

Of all the people in the world, I suppose the Doctor receives the heartiest welcome. He it is who visits the homes of the rich and the poor, the high and the low, the learned and the unlearned, the aristocrat and the peasant, the palace of Kings and the mud hovel of the poorest, and receives the same glad welcome from them all. He receives the same glad welcome whether he be the bearer of glad tidings of great joy as he places the new-born babe in its mothers arms, or announces the fact that he has wrestled with the dark angel of death and has one by one loosened his icy fingers, held him at bay, and finally driven him from the field; or whether it becomes his sad duty to announce that the last hope has flown, that medical science has been estopped, and that soon the loved one must obey the edict of God, where he says "all that is born must die," and the bright spirit must soon wing its flight to the God who gave it.

In times of sickness, sorrow and distress, or in times of health, joy and festivities he is the same welcome visitor to every home throughout the civilized world. We are not surprised then that this ever alert city should be delighted to receive as its guest the intelligence of the medical profession of this grand old State as represented by the members of the North Carolina State Medical Society.

The rattle and din of your streets as your people go to and fro to the marts of business or on pleasure bent, the busy hum of your thousands of spindles and the machinery of your many factories, the shrill whistle of the locomotive as your 48 trains pass through here each day, the chattering of your merry school girls, the twittering of the birds on your leafy boughs, the lowing of the cattle on your pastures green, the ripple of the rills as they madly chase each other down your hills, make melody, and are but the echo of the glad welcome you have extended to us to-day.

The billowy clouds kiss your verdant landscape with their dewy lips, the angels stoop and leave their fragrant breath in the form of dewdrops on the morning flowers, the majestic sun as he raises his stately head above the eastern horizon, coquets with the dewdrops and converts them into dazzling diamonds. In fact, all these seem to have conspired together with you to give us a royal welcome and to make our stay pleasant,

Again, on behalf of the North Carolina State Medical Society, accept our thanks; and with my heart in my hand and my hand in yours, I pray God's richest blessing on the loyal, progressive medical fraternity, and the brave men and fair women of beautiful Greensboro.

Modification of Cows Milk in Infant Feeding.*

By Charles Roberson, M. D., Greensboro, N. C.

Mr. President and Members of the North Carolina State Medical Society:

The most difficult problem confronted by the physician in the artificial feeding of infants and the goal toward which we have all been striving is the preparation of a food as nearly as possible identical with breast milk. Until recent years all the research has been carried on from a chemical standpoint, the object being to prepare a food in which the fats, carbohydrates, proteids, mineral matter and water were in the same chemical proportions as in mothers milk. But practical results as well as further study have proven that a chemical likeness, while very necessary, is not alone sufficient. For example: we might prepare an artificial food that would contain the identical percentage of fat, but this would not be the butter fat of breast milk, nor would it behave in the stomach in the same way. The proteids, too, might be chemically correct, but while ham, lean beef, white of egg, etc., are all proteids, it requires no argument to prove that these proteids would not suit an infant's digestion. The chemical knowledge of food and their values, however, has become very much more accurate within re-

*Read before the recent meeting of the North Carolina Medical Society at Greensboro.

cent years and the differences between the proteids of cow's milk and breast milk have been much more definitely estimated, and the manner in which they combine with the juices of the stomach, to form curds, more thoroughly understood. Modern chemistry has also taught us the differences in the emulsions of butter fats when separated by gravity and by the centrifuge, and the superiority of the former over the latter. But the greatest value of chemistry in infant feeding has been to teach us the percentages of each ingredient necessary for proper nourishment, and the curding properties of different proteids. Along with the advance in the chemical knowledge of milk has come a clearer insight into its physiological properties and its importance in teaching us that each animal requires food suited to its own peculiar needs. So the subject of infant feeding divides itself into two distinct propositions; a substitute for mother's milk must be identical with it, first; from a chemical standpoint; and second, from a physiological standpoint. To meet the first requirement it must contain fat, carbohydrates, proteids, mineral matter and water in the proper proportions to nourish the infant; and second, it must not only nourish the infant, but must be of such character as to develop its digestive organs. It naturally follows that a food whose chemical formula is identical with mother's milk will not suffice, for the reason that the ingredients would not act in the infants stomach in the same manner as does breast milk.

We have found from clinical experience that milk is the best food for infants, because the proteids of milk act in a peculiar way to develop the digestive tract. Hence, we are led to believe that the most important consideration in supplyiug food to an infant is its physiological property, that is, the power to develop the stomach of the growing child. We know that an infant at birth has practically no stomach, but a straight tube through which the milk passes rapidly into the intestines. In such a stomach very little digestion takes place, so the mother provides colostrum, which is intended to start the digestive functions and to develop the muscular action of the stomach, causing it to pass the contents on into the intestines where it is rapidly assimilated and also causes evacuation of their contents. Within a few days the secretion of the milk proper begins and at the same time the stomach becomes able to act on a part of the proteid by the rennet which is secreted at this stage in the stomach's growth. As there is no hydrochloric acid present as yet, the curd of the rennet is passed on into the intestines, thus increasing the muscular power of the stomach. The next step in the development is the secretion of hydrochloric acid and pepsin which begins in very small quantities. Pepsin will not act on the curd produced by the rennet, until it has first combined with the hydrochloric acid, so as soon as the acid cells become functional the acid is poured out, the combination between it and the curd takes place and then the action of the pepsin begins. From this point in the infant's life the stomach begins to grow larger and stronger and begins to retain the milk for a longer time in order to give the juices sufficient time to complete their part of the digestion. Hence, the intervals between feedings become longer and longer as more acid and pepsin are secreted. A study of the milk from different animals has taught us that the proteid in each kind of milk varies according to the needs of each particular animal, and combines with the acid and rennet with different results. Nature has provided that the proteid shall form curds of such character as will suit the digestive tract of the animal it is intended to nourish and develop. For instance, mare's milk forms a curd that is soft and gelatinous, so that it will pass rapidly into the intestines where most of a colt's digestion takes place. Cow's milk forms tough, leathery curds that stay in the stomach of the calf a long time, because its digestion is for the most part gastric. Mother's milk forms a flaky, finely divided curd, which is partly digested in the stomach and completed in the intestines. Following this line of reasoning a little further we see that the food of each animal is developing the stomach of its own young to digest the food it must receive when it becomes an adult, for the soft, gelatinous curd of mare's milk corresponds to the grain eaten by the horse which is digested mainly in the intestines, which form 90 per cent. of its digestive tract, and the tough, leathery curd of cow's milk corresponds to the hay of the cow's food and is digested mostly in the stomach, which forms 70 per cent. of her digestive tract. From the foregoing we reach the conclusion that the value of chemistry in infant feeding is to ascertain the quantities of each ingredient of the food necessary to meet its requirements, and at the same time it is essential that the proteids shall be of such nature that they will combine with the rennet and acid to form curds that will develop the stomach from one that will digest only colostrum into one that will digest the finely chewed food of the adult.

Cow's milk is the only source of supply available, which contains a proteid that will meet these requirements. The proteid of cow's milk, if given as it is, however, will not suit an infant's digestion; therefore, it must be altered by some means that will

cause it to curd in finely divided particles or flakes such as breast milk forms. This can be accomplished by several methods. Each has much to be said in its favor, but I shall omit all except the one that has proven most successful in my hands. It is the dilution of cow's milk with the dextrinized gruels. Credit for its discovery is given to Dr. Henry Dwight Chapin, of the Post-Graduate Hospital of New York, who worked out the method and gave directions for its use in the nursery.

The gruel is prepared as follows: One ounce of barley, wheat or rice flour is added to a quart of water and boiled in a double boiler from one-half to an hour. It is then set aside to cool sufficiently to taste, when one teaspoonful of Cereo is added, and the gruel stirred for a few minutes until it becomes thin and watery. It is then strained and sweetened and a little salt added. Then it is poured into nursing bottles and kept on ice till ready for use. The dextrinized gruels are better than water and lime water or any other diluent, because first it renders the curd of cow's milk floculent and breaks it up into finely divided particles. Second, it adds to the food a certain amount of carbohydrates and proteid matter. Third, it promotes a natural secretion of gastric juice by its being partially digested as if by the saliva of the mouth. Fourth, it is easily and cheaply prepared. The Cereo, which is used to dextrinize these gruels is a diastase preparation, made expressly for this purpose by The Cereo Co., of Tappan, N. Y. When any cereal is boiled in water the starch grains swell np, the cellulose covering ruptures and the resultant fluid is a gelatinous starch water. The addition of diastase will convert this starch into dextrin and maltose very much as does the saliva in the mouth. This fact is proven by the addition of iodine solution to the gruel at different stages in the boiling. The blue color of iodine with starch gradually fades until it fails to react, showing that all the starch has been converted. Having settled on the milk and diluent, next comes the proper percentage of fat, carbohydrates and proteids required by infants under varying conditions. Good whole milk has been found to contain practically four per cent. of each. Different investigators have found that the percentage of butter fat in different layers of cream after it has been allowed to rise will vary from 10 to 26 per cent., but that the milk dipped off to certain depths would yield fats of certain known and fairly constant percentages. For example: The top nine ounces of a good milk will contain 12 per cent. of fat or three times whole milk; the top sixteen ounces, 8 per cent. of fat or two times whole milk. The carbohydrates and proteids remain practically the same, so that in the top nine ounces we would have milk with a formula of proteid 12, fat 4, sugar 4. The method now in constant use by Dr. Chapin in the Babies Wards of the Post-Graduate Hospital, and by Dr. Holt in the Babies Hospital is as follows: If we wish to prepare a food for a young infant with a high fat percentage and low proteid, we would dip off the top nine ounces from a quart bottle of milk with the Chapin dipper, one of which I show here. This milk is thoroughly mixed in a pitcher and will contain fats, carbohydrates and proteids in the formula of 12-4-4. Then dilute that with three parts of dextrinized gruel, and we would have the formula 3-1.1. By adding 5 per cent. sugar or one part to 20 or 30 of food, we would have the food suited to that infant, 3 6 1. If the infant is older and we want more proteid and less fat, take off the top sixteen ounces in which the fat is twice that of whole milk and we have the formula 8 4-4. Now by diluting this with three parts of dextrinized gruel we have a formula of 2 2-3, 1 1 3, 1 1-3, or with the sugar added 2 2-3, 6½, 1 1 3, or we can take the top twenty ounces in which the formula is 6 4-4, and add equal parts of gruel when we will have a food of 3-2-2 with sugar added 3 6-2. So you see the percentages may be altered to suit any condition, and the proteids and fats can be made as high or as low as indicated by the condition of the infant to be fed.

A whole days feeding should be prepared each morning, and placed in round, eight ounce, graduated nursing bottles. These should be lightly plugged with cotton and kept on ice at a temperature of 50 degrees or below. If the weather is very hot and the milk has a tendency to sour, it may be pasteurized or sterilized. By carefully following these directions much sickness among babies may be avoided, provided: the milk supply is good.

This leads me to a point upon which I wish to lay especial emphasis. That is: the providing a purer milk upon which to feed our bottle babies. As we all know the most frequent cause of summer diarrhea is the presence of bacteria in the food, and by far the greatest per cent. of these bacteria gain entrance into the body by means of the cows milk upon which they are fed. The milk becomes contaminated either by the milkers, or by those who handle it at the dairy, by the vessels into which it is poured, or by those who bring it to market.

It is undoubtedly true that certain bacteria are salutary, but they are few in number, and when the bacterial count per cubic centimetre is large, it means that pathogenic bacteria are present, and they are

present because of the carelessness or ignorance of those who handle it. We can readily appreciate the fact that the greater the number of bacteria present, the more likely is the milk to be harmful, and the more liable is the baby who drinks it to be attacked with summer diarrhea. Now the practical point for us to consider is: What can be done to render our milk supply more wholesome? For by that means only can we hope to protect our infants from the milk borne diseases. Cows milk, to be suitable for infant feeding, should contain not less than four per cent. of fats, about four per cent. each of carbohydrates and proteids, and should be as free as possible from bacteria. In order to secure a milk that will contain 4 or 5 per cent. of fats, it must be had from a good herd of cows, and in order to keep the bacterial count within a safe limit the greatest cleanliness must be practiced.

In New York State where the greatest work has been done to purify the milk supply it was found that the bacterial count per cubic centimetre often reached into the millions. Through the efforts of Dr. Chapin there has been established a milk commission, whose duty it is to inspect all milk brought to the city, and this commission has issued a circular, a part of which I shall read.

"The Commission appointed by the Medical Society of the County of New York to aid in improving the milk supply of New York City invites the co-operation of the milk dealers and farmers in attaining that end. The sale of pure milk is of advantage to those furnishing it, as well as to those who use it. The commission has undertaken to assist both the consumer and the producer by fixing a standard of cleanliness and quality to which it can certify, and by giving information concerning the measures needful for obtaining that degree of purity. The most practicable standard of cleanliness in the handling and care of milk is its relative freedom from bacteria. The commission has tentatively fixed upon a maximum of 30,000 germs of all kinds per cubic centimetre of milk, which must not be exceeded in order to obtain the endorsement of the commission. This standard must be obtained solely by measures directed toward scrupulous cleanliness, proper cooling and prompt delivery. The milk certified by the commission must contain not less than four per cent. of butter fat, on the average, and have all other characteristics of pure, wholesome milk."

In order to secure a milk that will reach this standard, certain things are necessary, among which are: First, the cows, milkers and barns must be scrupulously clean. Second, the containers must be steamed. Third, the milk must, immediately after milking, be cooled to 50 degrees and kept there till used. The dairymen will supply us with such milk just as soon as a demand is created for it.

The duty of the physician in this case seems to me clearly defined. He should carefully instruct the mothers and nurses as to the dangers of impure milk, and at the same time should point out the advantages and absolute necessity of a good, pure milk.

I should be glad to see a milk commission established by each county society, whose duty it should be to inspect every dairy and its milk supply and make a weekly report to the department of health. Just as soon as the mothers realize the importance of clean milk in preventing the intestinal diseases of infants, the production of a certified milk becomes practicable. The laboratory of hygiene was established for just such work as this, and now is our opportunity to prove to the people its usefulness. Certified milk would demand a higher price per quart than the milk we are now using, and the increased price would not only pay for the additional cost of production, but would yield sufficient profit to make it worth the dairyman's while.

I hope some man from each county, who hears this paper, will lay the burden on his own heart and go home with the determination of having his society elect a committee to carry this work to completion.

Pneumonia, Practical Suggestions as to Therapeutics.*

By W. H. Anderson, M. D., Wilson, N. C.

The treatment of pneumonia is symptomatic, and will so continue until the antipneumococic serum proves its worth. The methods of treatment vary from that of the Doctor who says to his patients: "Trust in God and keap your bowels open," to that in which drugs are given ad nauseatum et mortem. The first is good as far as it goes, while there is some good in the second, but the rational plan of treatment lies midway between the two extremes. One thing is clearly established, there is no specific for this disease, so the toxæmia must be combatted, and the symptoms treated as they arise. Drugs are used when indicated and are contined as long as the desired physiological results are obtained. However, a change of treatment is always good treatment, when demanded by the symptoms.

In discussing the treatment of pneumonia prophylaxss should always be mentioned. The importance of prophylactic measures

* Read before the recent meeting of the North Carolina Medical Society at Greensboro.

was impressed on my mind by seeing a series of fifty-two cases in a hospital ward containing thirty beds. Forty-seven when admitted had pneumonia, while the remaining five, who were being treated for something else, developed this disease during a period of two months. While there is nothing conclusive in this series, yet it offers food for reflection. A simple and fairly effective plan is the following: the pneumonic sputum is received in a vessel containing a carbolic solution and is destroyed before having an opportunity of becoming dry. The lips, gums and teeth are wiped with a moistened cloth, and this burned. The nostrils, mouth and throat are kept as clean as possible by sprays, washes and gargles, while a cloth is held before the mouth to catch the pneumococci bearing spray which follows ordinary coughing. The room occupied by a pneumonia patient should be afterwards disinfected as in any other acute infectious disease. So much for prophylaxis.

If the patient is seen during the initial chill he should be put to bed, surrounded with hot water bottles or some suitable substitute and giue 1-8th grain morphia hypodermatically. The room should be large, airy and kept at 65 deg. Fahrenheit. The best ventilation should be maintained at all times for the life-giving oxygen in great abundance is absolutely essential, not only to sustain life itself, but for the comfort of the patient and the amelioration of symptoms.

Brisk purgation is secured at this stage by calomel in broken doses, followed by a saline and throughout the course of the disease the first indication of fermentation should be promptly attended to. The regular onset of symptoms, consisting of pain, fever, cough, high bounding pulse, with increased arterial tension, more or less dyspnœa, and nervousness to greater or less extent, now demand the attention.

The pain should be controlled by local applications of counter irritants, such as turpentine, by hot water bottles, ice, and by opium in some form. If this pain is associated with intense dyspnœa and marked cyanosis in a robust patient, then the most immediate as well as permanent relief is obtained from wet cupping or venesection. In venesection, from eight to twenty-four ounces of blood should be abstracted and the same quantity of normal salt solution should be injected, either through the vein or by hypodermoclysis. This relieves the pain, the dyspnœa and the laboring heart, while at the same time it eliminates a large quantity of the toxines. The remaining toxines are diluted by the use of the normal salt solution, and since the toxæmia is the chief source of danger in the disease the last mentioned result is of the utmost importance. Wet cupping or venesection in pneumonia used at the proper time and in well selected causes are remedies par excellence.

Should the cough prove troublesome, and if it is dry, backing and hard, Dover's powder or 1-12th grain doses of Heroin afford relief. When, however, there is much bronchial catarrh, with a good deal of viscid sputum ammonium carbonate is indicated to promote expectoration, being immediately withdrawn if it causes any disturbance or digestion. For most cases Dover's powder or Heroid are used during the first few days of the disease, while ammonium carbonate is used later.

The fever is allowed to take care of itself up to 103 degrees Fahrenheit. Between 103 and 104 degrees Fahrenheit it is reduced by alcohol sponge baths, while beyond 104 degrees, especially if associated with pronounced nervous symptoms and delirium, the ice pack and ice cap are useful. I have never seen quinine, either in small or heroic doses, do what is claimed for it.

In those cases in which venesection and wet cupping are not used aconite or veratrum viride should be used to relieve the heart. They are given in two minim doses every two hours until arterial tension and pulse-rate approximate the normal state. In a way it is unfortunate that these drugs are called depressants, since it serves to frighten off some who would otherwise use them. Remedies which depress the heart from an abnormal to a comparatively normal state, relieving some of the symptoms due to its excited and laboring condition, and conserving its strength against that time when all its energy is absolutely essential, cannot be wholly bad. For it here in the vast majority of pneumonia cases that the final and most important stand is made, and the outcome depends on how well the heart has been cared for. Figuratively speaking, the finger is kept upon the pulse while either of these drugs is being given, and just as soon as the purpose for which they are given is accomplished they are discontinued. On the other hand the conditions for which they are used must exist before they are ever commenced.

This is the general plan of treatment until the heart begins to flag, then cardiac stimulants are used freely and without fear. Of these the best are alcohol and strychnine, both of which are reserved until there is an absolute indication for their use, when they may be relied on for results. Beginning with one ounce of whiskey and 1-60th of a grain of strychnia every four hours, the

doses may be increased until the patient is getting an ounce of whiskey and 1-20th of a grain of strychnia every two hours. If these are given alternately a stimulant is administered every hour, this seldom being necessary, however, unless the struggle is being made to tide the patient over the crisis. If quick results are desired 30 minims of ether hypodermatically or drachm doses of aromatic spirits of ammonia will best sustain the heart until alcohol and strychnine begin to gixe their more permanent results. When the pulse becomes rapid, feeble and compressible, and the heart sounds, especially the second pulmonic sound, begin to grow faint, stimulants are indicated.

Throughout the course of the disease troublesome insomnia is relieved by some form of opium. At times marked improvement can be attributed to a few hours of refreshing sleep. All the organs of elimination are kept in a state of activity, plenty of water is given, and the bowels kept open by epsom salts or enemata. It is very important that fermentation should be attended to, especially in the late stage of the disease. With the lower half of the lung solid, the heart weak, and the stomach and intestines distended with gas, thereby causing the diaphragm to encroach on the pleural cavity, great discomfort is felt by the patient and it may even be a source of danger. After a saline purge, intestinal antiseptics, such as salol or beta napthol in five grain doses together with turpentine stupes are used. If these are not sufficient the rectal tube should be resorted to in addition.

After the exudate has begun to liquify ammonium carbonate or ammonium chloride may be used with advantage to further the process of liquifaction, and to stimulate expectoration. Of these two, ammonium chloride is perferred by those who believe that the absence of chlorides in the urine is proof that in this disease a special use is found for these salts. Should expectoration become excessive and bronchorrhea set in, atropine will usually give most satisfactory results. It is given in 1-150th grain doses, the dose being increased to 1-75th grain until results are obtained.

If in the late stage dyspnœa is exaggerated cyanois marked, the pulse rapid, feeble and compressible, all showing venous stasis and an over-loaded right heart, venesection is used as a last resort. Here as in the first stage the abstraction of blood is followed by the injection of normal salt solution, and in addition oxygen is freely used. I have not mentioned the use of oxygen before, because while it is good treatment it is not conveniently used by a great many physicians.

In delayed resolution pilocarpine may be used, but better results are usually obtained from a more generous diet, tonics and iodide of potassium internally and the local application of tinc. of iodine externally. At times when this is not sufficient, good results are obtained from blistering.

In pneumonia milk is the chief article of diet. In addition to this meat broths, predigested foods, eggs, small quantities of alcohol, iced grape juice, alone or with milk, and orange juice are given.

The anti-pneumococcic serum has not been mentioned because it has not so far reduced the death-rate in pneumonia, nor has it been proved to possess any special advantage in the treatment of the disease. Neither has it been proved that large doses of quinine or digitalis in the early stages are capable of aborting the disease, nor that carbonate of creosote is a specific. The theory that part of the symptoms of pneumonia are due to an acid intoxication which should be treated by large doses of the alkalies, one to three drachm doses of bicarbonate of soda, has not yet been generally accepted. In other words, there is neither specific nor routine treatment for pneumonia, and the best that one can do is to combat the toxæmia and treat the symptoms as they arise.

"Gastro Enteritis."

By Jno. T. Burrus, High Point, N. C.

Mr. President and Gentlemen:

As we are now beginning the work of another summer frought with all its changes and surroundings, we are reminded that we must deal with Gastro Enteritis face-to-face and the foaming billows of this fawning sea we are called on to engineer the little bark of many a sweet little infant or a child, and our conduct while caring for these little ones will many times distinguish us as safe captains through such a sea.

In discussing this subject I shall only speak of it as seen in infancy and endeavor to present a practical paper in a practical way, on what we so commonly know as summer diarrhoea in infants. Many pictures are daily seen by the *Clinician* as we with steadfast determination go out day by day to discharge our duties. But there is nothing which should demand closer attention than the little infant wrapped in the arms of this horrid malody. The picture to which I refer is one that has been seen by us all many times, and when once seen is to be feared especially if the family history is bad and the child is being raised on artificial food. Many times I have seen children artificially fed from election, but the majority of them are from mothers with

* Read before the recent meeting of the North Carolina Medical Society at Greensboro.

poorly developed mamas, and hence are artificially fed from necessity. Often the surroundings are very bad with seemingly no knowledge of sanity or hygiene. In getting the family history we find that many times these children are from parents that have Syphilis, Tuberculosis or Scrofutitis Lendenceis and in other words there is not the good breeding, (if you will excuse the remark) which makes the child capable of resisting or throwing off disease.

Causes.—There are two ways in which we see Gastro Enteritis. First. That due to infection. Second. That due to nervous origin through the central nervous system. (Dr. Zeb Shipley.)

Predisposing Causes.—Mal neutrition, unhygenic surroundings, age of child and Temperature,

Exciting Causes.—Improperly prepared food, irregularly administered, improper articles of food, prolonged exposure of heat, sudden change in the temperature, excitement and fatigue.

We may have this disease due to acute indigestion, and with the stomach in this disordered condition we find it an inviting field for pathogenic bacteria which multiply very rapidly when the condition is favorable to their growth.

Symptoms.—Nothing has been seen by the physician that should appeal to us more than this familiar yet unsteaded disease. There is a great variance of the symptoms, due to the amount of disease producing substance, and to the peculiar characteristics of the patient, therefore making the mode of onset very variable. The lesion in this form of summer diarrhoea is slight and the severity of the symptoms are due to the absorption of the Toxines. When the onset is gradual the symp oms may present very little to distinguish from acute indigestion. In the mild form we find the child restless at night, occasionally colicky sensations and at first is very little noticed by the attendants until the fever begins, which comes on gradually with an increasing evening temperature and even now the parents are led to believe that the baby is only teething and in due time all will be well. As the disease progresses the stools become more frequent, with greenish watery discharge and a very bad odor, containing particles of undigested food. If the Dejicta is examined with the microscope there is also seen Epitheliol cell; the fever increases to to 102 deg. or 103 deg. F. with an evening temperature of 104 or 105 F. The lips are dry and drawn, tongue of a heavy brown fur and the child very thirsty. The limbs become soft and flabby, the face is drawn with an anxious expression. Thirst is often very much pronounced and when you find the patient so very thirsty you will see an inability to retain anything on the stomach.

Second.—In the more severe form you have persistent nausea and vomiting, frequent watery stools excebration before the evocation, rapid emaciation, urine scanty and high colored, very high fever 105 deg. F. or 106 deg. F. marked anemia, muscles become soft and flabby. The lower limbs swollen and a sunken eye-ball only partly closed by a pail lid. In this form you may see the disease ushering itself in by convulsions, which leads me to expect an unfavorable termination.

Treatment.—There are three heads, (1) Hygenic; (2) Diatitic and (3) Medicinal.

Hygenic—It goes without saying that the child should have all the fresh air and sunshine available it matters not how high the temperature or how great the anemia, an elegant way of giving the baby fresh air is to make their little bed in the hammock or carriage and place it on the piazza. Clothing should be loose, but of sufficient weight to keep the child warm. If the child has been sent away to the mountains or sea-shore it will be necessary to clothe heavier, some advise flannel. The bathing is of great moment and should be carefully administered. Every morning the child should have its bath in tub of water at 100 deg. F. and gradually reduced to a temperature of 75 deg. or 80 deg. F. and while in this bath should be thoroughly rubbed. This always restlessness and the child is seen to fall into a refrething sleep. If the temperature is very high I repeat this bath in the evening. The genetoles and buttox should be well cleaned and as often as a napkin is soiled it should be removed and put into a solution containing Boracic Acid or Bi Chloride and the parts thoroughly dried and a clean napkin applied. It may be necessary to give the child a change of surroundings and get the refreshing and invigorating air of the seashore or the mountains, but many times our patients are unable to do this so we administer the best which the surroundings afford.

Diatethis Treatment.—Our first direction is to stop feeding until the most exciting stage is passed with the positive injunction that nothing must be given the child for at least 24 to 48 hours. If the child is nursing its mother this direction must be as positively given as if the child was being artificially fed. The breast should be withheld for 24 hours or until all vomiting ceases and the stools less frequent. After vomiting has ceased for 12 hours, then the child may have the breast

for 2 minutes every 4 hours. If there is no tendency to excite the symptoms then the quantity of nourishment may be increased, but if there is a tendency to nausea or the stool becomes more frequent, then the breast should be withheld for 12 to 24 hours longer with absolutely nothing on the stomach. For the thirst I administer high salt enemas, which removes the mucus and allays restlessness. After the first 24 to 36 hours I administer 1 oz. of Albumin Rice or Barley Water every 4 hours, if this is borne well I increase the quantity and give if oftener. If there is extreme prostration add to the Albumin or Barley Water stimulants, such as brandy or rye whiskey. If this is well taken I allow animal broths which are very nourishing. Neut Lig. Peptonoid may be given every 4 hours well diluted and as the fever subsides the vomiting ceases, the stools less frequent and convalescence well established, then the child may be allowed to nurse the mother for nourishment, but there should be certain hours and a specified length of time to allow the child to nurse. In the event the child does not receive its nourishment from the mother and a wet nurse cannot be secured, we naturally turn to cow's milk as our last resort, and no more important subject has ever come to us. When milk is begun both the Cacine and fats must be very greatly diluted and in many instances the Cacine pre-digested. Holts Formula for feeding a 10 month old child is: Fat 45 per cent.; Sugar 4 per cent.; Protiads 50 per cent.

It is one of the most important parts of the treatment and therefore should be thoroughly emphasized. In leaving a direction for feeding, it should be always written with the articles of food, the quantity and the hours specified. The direction which I usually leave and the manner they are left are as follows:

First Visit—First 24 hours absolutely nothing on the stomach.

Second Visit—48 hours. Give 2 Dr. of Albumin Rice or Barley Water on ice every 4 hours.

Third Visit—72 hours. To 1 pt. of Album Water add 2 Dr. Cream, 2 Dr. Sugar, small quantity animal broth and direct 4 oz. every 3 hours.

Fourth Visit—96 hours. I leave the following formula: Milk 2 Oz.; Sugar 2 Dr.; Cream 2 Dr.; Lime Water 2 Dr.; Serril Water 4 Oz. Allow this at one feeding every four hous.

Medical Treatment.—If treatment is instituted at the beginning of an attack there is very little trouble to control the condition. But if let alone for a few days then it becomes a very difficult thing to treat. It matters not to what extent or in what form the disease is manifesting itself the first thing to be done is to thoroughly cleanse the alimentary track and keep it clean. When the disease is ushered in by nausea and vomiting the stomach should be thoroughly washed with Steril Water using 1 qt. to ½ gal. through a stomach tube. This clears the stomach of any foodstuff or mucus that may be there, and it puts the stomach at rest. In the majority of my cases when the stomach tube and water was used freely there was very little trouble in controling the nausea and vomiting, the temperature was reduced and the patient had the general expression of comfort and well being. After this we should now endeavor to empty the intestinal track. For this I order ⅛ gr. dose of calomel every 2 hours until one or two grains are given, then I administer a large dose of castor oil and after 4 hours give a high enema of normal salt water and leave directions for a high rectal enema twice a day, using 1 qt. of normal salt water at a time. I now administer Phos. Sodium in combination with Aromatic Syrup Rhubarb. This is well borne and has served me well. If there is acid fermentation with distention of bowels and eructation, the alkalies are of much value. Bi C. Soda in 1 gr. dose every 3 to 4 hours. Lime water or a chalk mixture may be seen to do much good. I do not use intestinal astringents for I am sure I have never derived any good from their use and in a number of cases I have seen them do much harm. I am of the opinion that there are many little mounds in the church yards today due to the use of opiates and other intestinal astringents.

Therefore I never give opium in any form by the mouth. When we see a case early in the disease where there is great restlessness and where there is so much cramping, I administer 1-80 to 1-100 gr. doses of morphine sulphate hyperdermically, but I prefer never to use it at all. "Never use a drug or a combination of drugs if the stomach is disturbed by so doing." For the restlessness, Monobro of Camphor acts well, given in very small doses and often repeated. For the fever, cold water spunges or cold packs if the fever is very high will give much relief. After removing the child from a cold bath it should be wrapped in flannel and kept quiet for several hours.

After the acute symptoms have subsided I frequently administer some form of stimulent, brandy or whiskey well diluted has given good results in my hands. I administer then in small quantities and not oftener than every 4 hours. If there is ex-

treme prostration and rapid waste of tissue, I administer a subcuteneous injection of normal salt water, and give Adnenlin Chlor, hyperdermically, mustard packs or hot baths. During convalescence there is only one thing to be done and that is nourish the child. In this stage Cod Liver Oil in an emulsion is beneficial if the stomach can tolerate it. I have never derived any benefit from Bismuth or Pepsin in this condition, therefore I have discarded their use.

Report of Cases.—Case No. 1, M. E. D. child ten months old, white, family history good, nursed by mother, was taken ill June 20th, 1904. Vomiting and frequent watery stools, very restless and tossing itself from side to side—frequently there was a cry as though it was in intense pain. Child restless and with a pale face, would vomit everything given it. Fever was 103 deg. F. and a very quick pulse. I introduced a stomach tube and washed the stomach very thoroughly with steril water. Following this I ordered 6 doses containing ¼ gr. calomel, 6 gr. sugar of milk and 6 gr. Phos Sodi and directed one powder every two hours until all was given, which was well borne. Four hours after giving the last powder I directed 2 teaspoonfuls of castor oil. I left a positive direction that the child should not be allowed to nurse or have any kind of food on the stomach until I returned. On the following morning I returned and found temperature much reduced, pulse easy and less frequent, child resting well and had not vomited a single time after the stomach was washed. I now washed out the lower bowels with steril water containing salt and Glyco Thymoline with a long rectal tube. I withheld food all the day and at the expiration of 36 hours from my first visit I admitted 1 tablespoonful of rice water every 3 hours. I gradually increased the quantity at each time until I added to the rice water a small quantity of milk, cream and sugar. This was well borne. At my next visit I put the child on: Phos. Sodie 16 grs.; Cret. Prep. 16 grs.; Spr. Minth. Pep. 6 drops; Listerine ½ dr., Aqua to make a 2 oz. mixture. Sig., 1 dr. in water every three hours.

After 48 hours I ordered the following, given warm every 3 hours: Milk 1 oz., Lime Water 1 dr., Cream 1 dr., Sugar 1 dr., Water (Steril) 4 oz. The child made an uneventful recovery.

The case beginning very severe I report it to show that if proper treatment can be instituted at the beginning of an attack we invariably get good results.

Authors quoted: Holt, Shipley, Star, Wescott and Smith.

Pneumonia from a Personal View Point.*

By J. B. Wright, Granite Falls, N. C.

Etiology.—Pneumonia is an acute inflammatory infectious disease of the lung—due to some specific microbe. The Diplococcus Pneumonia is the name of the germ holding first place among bacteriologists. I am no bacteriologist, so shall not attempt to discuss the name, size or shade of the microbe causing the disease. But from my limited experience, I do know it is due to something more than exposure to cold or to overwork and debilitating conditions of various kinds There is bound to be an exciting cause and this is a microbe. During the severe cold weather we had last January and February there was not a single case of pneumonia in my practice. But after the sleet and snow had melted and the weather was warm and pleasant there was an epidemic of colds in my town, and several cases of pneumonia followed. This was conclusive proof to me that exposure to cold did not cause pneumonia per se. I could relate instance after instance of exposure for a long time to severe cold with overwork and yet no pneumonia, and on the other hand I can give instance after instance of severe attacks of pneumonia where patients have not been exposed and were not subject to any of the predisposing causes. Such as over-work of mind or body—dampness, cold, etc. The real cause is a germ, and I am satisfied there is no other cause. It is true pneumonia occurs during the cold half of the year, and the same is true of small-pox yet colds has nothing to do with that disease, and it is also true of diphtheria and yet cold has no part to play with the cause of diphtheria. And we have a majority of our cases of typhoid fever during the warm half of the year, and yet heat has nothing to do with the cause of typhoid fever. I believe pneumonia is caused by a specific germ as much so as I do that diphtheria, or small-pox, or typhoid fever is, and I believe a correct history will prove me out correct in my assertion. We have the same predisposing causes for pneumonia that we have for any other germ disease, namely emplanting the germ in its selective soil and rendering the soil fertile for the germs' growth by lessening the resisting power. I do not mean by the above that lessening the resisting power is the same in all germ diseases, for instance, a derangement of the stomach and bowels would have more weight in lessening resistance to the bacillus of Eberth than it would to the diphlococcus pneumoniæ, and on the other hand la grippe would lessen

*Read before the recent meeting of the North Caroliua Medical Society at Greensbor.

resistance more for the diphlococcus pneumoniæ than for the bacillus of Eberth. Bacteriologists have found the diphlococcus pneumoniæ in the salivæ, larynx, pharynx eustachean tubes, blood, kidneys and spleen. So we find this little fellow almost all through the human body. But it seems that it never gets active until it reaches the parenchymal structure of the lungs. As it would require too long a paper to attempt a discussion upon the entire subject of pneumonia, I shall omit the history—pathology, morbid anatomy, symptoms and diagnosis. However, before leaving the cause, I wish to state that bacteriologists admit that the diphlococcus pneumoniæ is not the only organism capable of producing pneumonia. It may be accompanied by other organisms which might be responsible for the complications and irregularity of its course. Thus caused pneumonia may be considered from two standpoints. First, it may be a general disease with a local expression in the lungs as typhoid fever is a general disease with a local expression in pyers patches; or second, it may be a local disease which infects the whole system and produces the constitutional symptoms which are characteristic of it, and is the case with diphtheria. If pneumonia is not infectious and due to germs, how about the many epidemics occurring all over the land. To make my treatment better understood I will implore your indulgence for a short time on the dry subject of Physiology. Pneumonia being confined principally to the parenchyma of the lungs, I shall only dwell upon that portion of its structure. Tracing from above down, beginning at trachea which divides into the bronchi. The bronchi subdivide into many bronchioles which split up into innumerable air cells or vessicles. These air cells make up the parenchyma of the lungs. This being the particular portion of the lung structure, I wish to dwell upon, for it is through the parenchyma portion of the lung the blood and air exchange gases, and the blood oxigenated and purified. The walls of these little air vessicles contain very abundant small elastic fibers, which do not form distinct bundles for each vessicle, but anastamose freely with each other so that the same bundle of fibres go to make the walls for two or more air cells. This gives the lung tissue its great elasticity. Interwoven in these elastic fibres is the richest plexus of capillary blood vessels found in the human economy. These plexuses are so very close together that the spaces between them are much narrower than the vessels themselves. When these capillary blood vessels are distended with blood they form the greatest part of the walls of the air vessicles. The air vessicles are lined with flattened epithelium cells which are very thin, and are applied directly to the walls of the blood vessels, and it is through these thin flattened Epithelium cells that the blood has the power of interchanging gases with the air. Here at the union of the blood and air in and around these air vessicles is the seat of pneumonia, and when inflammation goes into consolidation, then the circulation as well as respiration is seriously interfered with. Hence I shall implore a continuance of your indulgence until I can lay emphasis upon a few points about the heart and circulation, so that my treatment may be better understood. All of us are familiar enough with the heart to know that the walls of the left ventrical are much thicker than those of the right ventrical, and that the right ventrical pumps venous blood through the pulmonary arteries to the lungs, where as shown above it is aeriated and brought back as aerial blood through the pulmonary veins to the left heart, and then sent through the entire system furnishing life to every organ of the body. But we are prone to overlook the fact that the two sides of the heart act simultaneously. And at the same time the blood is sent by the left ventrical through the aorta to the system, it is also sent by the pulmonary artery to the lungs, and that the circulation through the lungs meets with less than one-half the resistance than does the systemic circulation, and that the blood pressure in the pulmonary artery is about one-third as great as that in the aorta. So a cardiac and circulatory depressant would act in the same ratio as the pulmonary resistance and pressure is to the systemic resistance and pressure. Therefore a cardiac and circulatory depressant (whether a drug or vennescetion) would relieve the pulmonary engorgement at the ratio of two to one—i. e., to the amount of depression on the heart and circulation, as it meets with less than one-half the resistance of the systemic circulation and vice versa, a cardiac and circulatory stimulant would act in the same ratio namely two to one, i. e., to the amount of stimulation to the heart and circulation, its action would be more powerful upon the pulmonary circulation which is already overflowing from the pulmonary consolidation. Theoretically a cardiac and circulatory depressant should be used during the entire course of the disease. But practical experience has taught us we cannot lay any set law down and follow it in all cases of pneumonia, or any other disease. Having given a brief sketch of the physiology of the heart and lungs as the circulation and breathing are most interfered with, I shall now turn our attention

to the treatment, a brief summary. We have a patient with an infectious disease, high fever, bounding pulse, and rapid respiration, with a local site of inflammation (which soon reaches consolidation) in the parenchyma of the lungs. Every patient should be a law to itself, for a stout, robust young patient with plenty of rich blood and strong heart and constitution should not be treated as a very weak, frail patient with a weak heart and constitution. We, however, treat the infectiousness the same in all cases. The germs as above shown are found in almost every viscus of the body and in the blood, saliva, etc. So to successfully combat their action we must give a general antiseptic with its most powerful action upon the pulmonary structure. I have found creosote from personal experience to be that drug. It has been my sheet anchor in pneumonia for the past five years. I consider creosote the most reliable pulmonary antiseptic known to the medical profession, and it is by no means a poor general antiseptic. It is absorbed into the blood unchanged as pure creosote. Its value in pneumonia is made very clear when we note the fact that a microbe is the exciting cause of pneumonia, and its selective site of invasion is the parenchyma of the lungs. And that creosote is both excreted and eliminated by and through the lungs. Hence its special pulmonary antiseptic properties. Creosote enters the impure venous blood which is sent through the pulmonary circulation to the lungs to be purified. The pulmonary circulation being small compared to the systemic circulation, and as all of the blood of the body is forced through it, the lungs are more thoroughly bathed in this creosote charged blood than any other viscus of the body. The capillary plexus of blood vessels above described is thoroughly permeated with pure creosote through the blood destroying all microbes or at least rendering the soil less fertile for them. Thus creosote acts as no other known drug will in combating the virulence of the Diphlococcus Pneumoniæ. The many drugs and measures that are demanded in treating pneumonia forbid a liberal discussion of them all. It is by no means my desire to leave the erroneous impression that I rely upon creosote to the exclusion of other drugs that alleviate and control the symptoms. Aconite or Veratrum in small, but frequent doses will control the throbbing pulse as no other remedy will. Local applications have their place in successfully treating pneumonia. A liberal blister is often of inestimable value. I frequently use antiphlogistine and counter irritants, especially in children. In the beginning of every attack of pneumonia it is necessary to get the emunctories thoroughly active, to assist in eliminating the waste and toxaemic products from the system. To do this I give purgatives (usually calomel), diuretics and diaphoretics. When the fever goes too high febrifuges or cold water is required. If patients heart is not weak I prefer the former. Heart tonics and stimulants should be given when indicated, and not given as a routine treatment. I prefer strychnia and alcohol. Anodynes should be given to relieve pain, expectorants are sometimes needed, but it is the exception and not the rule.

The Technique and Results of One Hundred Consecutive Laparotomies.*

By J. F. Highsmith, M. D., Fayetteville, N. C.

When asked for a paper under this section by your Chairman, Dr. Munroe, a few weeks ago, it occurred to me that it might be of some interest to the section to report a series of laparotomies which have come under my care, with special reference to the technique and result of the same.

I cannot go into details of each individual case, but will treat them collectively. Many of the cases in themselves, are very interesting, giving sufficient material for prolonged discussion.

With many of you, especially the older ones, who have had experience with laparotomy work, this report will be very simple, but to the less experienced ones, who have been plodding their way, taking cases as they come, endeavoring by abdominal section to reach the seat of the disease, and with one object in view, namely, save his patient, restore him or her to health, I hope you can bear with me in this simple effort, treated in a practical way.

My limited experience teaches me that it is a minor point in technique in the vast majority of laparotomies, which brings success and makes us rejoice with our patient in the result which follows.

With many operators, with their eyes fixed on the removal of a large tumor, or in the attempt to do the work too quickly, minor points in technique are overlooked, infection follows, and our efforts in the case a failure.

Before operating, I have tried in each case, to make a thorough examination of the patient's general condition; the heart, lungs, liver, kidneys, etc., are carefully looked after, the urine always being examined quantitatively and qualitatively. Having by careful study of the case arrived at a conclusion, I proceed to make preparations for operation, where in my judgment, an operation is necessary.

*Read before the recent meeting of the North Carolina Medical Society at Greensboro.

Many cases coming to the hospital for operation, are very nervous, having suffered for a long time, and are anxious to have it all over, and do not want to wait the proper time before operating. No case, should in my judgment, be operated upon under three days, and better, a week, after coming into the hospital. Of course this does not apply to emergency cases, but to the cases which can wait, and become acquainted with their surroundings, with their nurses and physician in charge, and vice versa.

During this period the digestion is gotten into the best possible condition, such foods as have a tendency to the formation of gases I prohibit, giving foods highly nutritious, yet easily assimilated; the secretive and excretive organs are carefully looked after, for when these organs are acting properly, we are apt to have good results, for it is through them that the poisons are eliminated, and the shock to the system from the operation, is overcome.

I do not believe in keeping the patient in suspense by meddlesome treatment and foolish delay, no more than to rush into an operation without the proper preparation; we must be thorough in our preparation.

Granting that we have several days at our disposal, patient should have bowels moved daily, daily baths and mental diversion. For three days preceding the operation, patients are allowed the most easily digested food, and on the third day preceding the operation, I give my patient broken doses of calomel for eight or ten hours, followed by epsom salts. Then, the evening of the day before the operation, two ounces of castor oil administered by mouth. The same evening, the patient should have a thorough tub bath, the field of operation carefully shaved, then scrubbed with green soap, and green soap poultice applied and allowed to remain for six hours, then the soap washed off with sterile water, and a gauze pad saturated with 1:4000 solution of bichloride of mercury applied and allowed to remain until morning. On the morning of the operation, the patient should have a large soap suds enema, which should be expelled as effectually as possible. After enema, second preparation is made of the field of operation with sterile water and alcohol, and a bichloride compress of 1:2000 applied. After the patient is on the operating table, pad removed, again scrub with sterile water and sterile tincture of green soap, which is followed by alcohol or ether, and lastly, 1-2000 bichloride solution. The catheter should always be used, or bladder emptied naturally, a short time before the abdomen is opened.

The operator's hands, as well as those who assist him, are thoroughly scrubbed with sterile green soap and water for ten minutes, then thoroughly scrubbed in 1-4000 solution of bichloride for ten minutes, then rinsed in a hot sterile normal salt solution, and from time to time during the operation, rinsing the hands off in a bichloride solution 1-4000, and then in the sterile normal salt solution.

I believe that the bichloride solution is the best and safest sterilizer for the hands, for it hardens the epidermis and prevents perspiration, and thereby prevents bacteria being brought out through sweat and oil glands in the skin. The rubber gloves I have never used, for I cannot believe that I can have the same cultivated touch with them, to enable me in arriving at the diseased condition of the tissues, and without the sense of touch, I would be at sea, my eyes being on the tip of my fingers, as it were. I know many good surgeons employ gloves in their abdominal work; but for my part, I have used no gloves, and seldom have I had infection.

Of course surgeons and assistants are now attired in sterile gowns.

The anesthetic has been chiefly ether, (Mallincrodt's). I believe ether to be all round, the safest anæsthetic for major operations. I have had no bad results to follow its use, nor have I with chloroform.

The patient ready for operation, I make with a sharp knife, an incision through the skin and superficial fat, down to the sheath of the rectus muscle, dividing this carefully over the rectus muscle; then, with the handle of the scalpel, or my finger, open up the folds of the muscle without tearing it, down to the peritoneum, now control all bleeding vessels; this done, the peritoneum is held up with peritoneum forceps, on the one side by myself, and the opposite side by my assistant(then I make an opening into the peritoneum, small at first, only large enough to introduce my finger for examination. At this point, I become extremely careful with my technique in antisepsis, rinsing my hands with bichloride solution of 1-4000, passing them through a hot normal solution, then introducing my finger, and by touch quickly arrive at a true condition of the organs; this done, the opening is made as large as necessary for the case in point. I would not lay down any iron clad rules as to the size of the opening made in the abdominal wall. I make it large enough to serve the purpose, but am careful not to make too large an incision until I find a necessity for it, for the larger the incision the greater the shock, and the more liable we are to have complications follow. On the other hand, it is better to make your incision large, than to try, through a small incision, to remove a growth and run the risk

of bruising the parts. Each case, however, is a law unto itself.

I do not use the regular retractors any more than I can help, preferring to use the hands for this purpose, where I have good help, as we are not so liable to bruise the tissues. I do not irrigate the cavity unless it be a pus case or there is questionable sepsis. I first irrigate with equal parts of peroxide of hydrogen and sterile water, then use 1-8000 bichloride, afterwards thoroughly washing out with a sterile normal salt solution. If the case be a prolonged operation, or for any cause the patient exhausted and weak, I use the normal salt solution freely in the abdominal cavity, washing out the cavity until the solution is perfectly clear, and then allowing sufficient to remain to help in adjusting the omentum and bowels.

But, if these conditions do not exist, I close the abdominal cavity without irrigation, only mopping out the excess of blood with a sterile sponge or tampon. When drainage is necessary, I drain at the most natural point to give free exit to pus, many times have drained through Douglass' *cul de sac*, or in the case of a hysterectomy, through the cervix into the vagina, but drainage I never use, unless compulsory,

I use as drainage the iodoform or the plain sterilized gauze wick. I allow this drainage to remain in for three days, or longer, without being disturbed, if the temperature does not indicate its removal, and many times, even for a longer period.

When ready to close the abdominal incision, I bring the peritoneum together with a continuous catgut, plain No. 2, then the recti muscles and the fascia with an interrupted chromicised catgut. This step, I believe, one of the most important in closing the abdominal incision; that is, adjusting the fascia and bringing it together with the muscles securely, and thus preventing hernia. The skin and superficial fat, I bring together with interrupted silk, or silk worm-gut, and recently, with plain catgut, being careful to approximate the edges, also watching that there is no excessive bleeding as a result of introducing the skin sutures. While I do not waste time in closing this incision, I try to leave it as dry as possible, with the parts well approximated, for if there be a little blood clot left behind, or excessive moisture, we will not have primary union.

In the introduction of the sutures, we are more liable to have them too tight than too loose; just tight enough to hold the parts together without tension. Many stitch hole abscesses are caused by too much tension.

The wound closed, parts well approximated, no oozing, as little moisture as possible, I place on dry sterile gauze, using no powder of any kind; then a heavy sterile cotton pad, holding this in position by adhesive strips, then applying a scultetus bandage. When through, no drainage used, everything goes well, I do not look at the wound again under ten days, when I remove dressing, examine sutures, and remove them.

This naturally brings us to the after-treatment of these cases, and let me say that almost as important as the operation itself, is the after-treatment. We must let alone good conditions and look after the bad ones. Do not meddle. After nausea ceases, water in small quantities is given every hour for about six hours, then peptonoids or similar preparation, for twenty-four hours; the patient is kept on liquid diet, consisting of broths, egg albumen and malted milk, but no sweet milk allowed. If temperature remains normal, soft eggs, toast, custards, and similar foods are given, and gradually followed by semi-solids. The bladder is carefully watched, being catheterized if necessary, every six hours. The bowels are opened as a general thing on the third day, but in case of sepsis or adhesion, are opened as soon as the patient can retain medicine given. I usually give small dose of calomel, followed by epsom salts or soap suds enema, keeping the bowels opened daily.

I do not use morphine to relieve pain, if possible, to do without it, and if something must be had for that purpose in the first few hours, I first resort to codine hypodermically.

When the case is clean and no adhesions I do not usually disturb the bowels under 48 hours, when they are moved.

The patient is kept in bed from three to four weeks. After the third week, the patient is allowed to sit propped in bed for one-half to one hour, as strength indicates. This is increased one hour daily for several days, and then allowed to get into a wheel chair. Before allowed to walk, an abdominal support as a safeguard to hernia, is applied.

The one hundred cases I report are made up as follows, and with the following results:

Twenty hysterectomies, with two deaths.

One from the removal of the uterus for carcinoma, patient dying twelve hours after the operation, never entirely rallying from shock; the second dying on the fourth day after the removal of the uterus, for a 15-pound fibroid.

In this case, bowels and kidneys acting well, patient reacted, but the heart ran away. I believe it was the reaction on the heart, brought about by the removal of the tumor, acting on the principle of the pen-

dulum of a clock after the weight had been removed.

These two cases were greatly emaciated when they entered the hospital. The other 18 cases made uninterrupted recovery, and thus far have heard of no bad results following, except in one case, for the removal of a multiple fibroid, reports a small hernia.

Forty ovariotomies, with two deaths.

One death, after the removal of a fibroma of the ovary, with numerous adhesions, died 24 hours after the operation, being unable to control the capillary oozing, She had every symptom of internal hemorrhage, and the post-mortem examination revealed such the case.

One death, removal of very large ovarian cyst of long standing; patient died four days after the operation, could not get bowels to move, kidneys acted well. Think in this case, if I could have devised some plan to hold the weight of the anteabdominal wall off the bowels, until they could have regained their tone, this patient would have recovered.

The remaining 38 cases all recovered.

Ten salpindectomies; one death.

This was a large pus-tube of tubercular character, patient living for three weeks and dying from exhaustion.

Ten ventro suspension; all recovered and doing well, so far.

Five ventro fixations; all did well.

Two ectopic gestation; both recovered.

Two tubercular peritonitis; one died.

I know that the general concensus of opinion is to close the incision after operating for tubercular peritonitis, and I have not had sufficient practice in this class of cases to form a well grounded opinion, but with these two cases, the one I drained recovered, and the one I closed died. I do not believe there can be any iron-clad rule laid down about this, but each case will, to a certain extent, be a law unto itself.

Ten appendectomies, four catarrhal and six suppurative. All recovered.

In the catarrhal cases I have opened up the abdominal wall after McBurney's method, amputated the appendix, then invaginate stump into the cecum by the circular suture.

The suppurative cases I have very cautiously dissected down to the peritoneum at McBurney's point, picked up the peritoneum and clipped it just sufficient to introduce my finger and explore. In every case except one, I have been able to find the appendix and remove it, then thoroughly irrigate the cavity with hydrogen peroxide, ½, followed by 1-4000 bichloride solution, then pack lightly with sterile gauze. These cases have to be carefully watched and the bowels moved well daily.

One gunshot wound of the abdomen; recovered.

This sketch has been very brief, and necessarily so with me, but I hope it may not be out of place, and may elicit thought and discussion which may be of interest to others and helpful to me.

Post-Operative Nausea and Vomiting.*

By Lawrence E. Holmes, M. D., Asheville, N. C.

Never remembering to have seen a detailed report on a series of cases with regard to post-operative nausea and vomiting, and feeling sure that at least some of the commonly accepted ideas on the subject did not coincide with personal experience, I thought it would be of interest to keep such a report of the cases operated on at the Biltmore Hospital, and by a study of same, try if possible, to arrive at correct conclusions on the subject.

The observations in this paper then, are based on the study of a hundred operative cases. The anaesthetic employed in every case being ether. On account of the great infrequency with which we use chloroform, I have a report of only 15 cases which I shall mention separately. In these the anaesthetic was administered by several different doctors; the etherizations were all my own, and in every case the method was the same, viz: by means of a gauze pad 5 or 6 inches long and 4 or 5 inches wide, from 16 to 32 layers in thickness (the number of layers depending upon the coarseness of the gauze used) placed in front of the mouth, at first several inches away, then gradually brought nearer till it rests on the face and is finally pressed down on each side the nose, so that the only air the patient inhales passes through the ether-laden gauze. After the patient is once thoroughly anaesthetized, the last precaution, viz.: keeping the gauze pressed down on each side the nose, is not as a rule necessary to keep the patient in that condition. By thus gradually bringing the gauze nearer the face, the proportion of the ether in the inhaled air is so gradually increased that the patient usually passes into unconsciousness without a struggle.

One great recommendation for this method is its simplicity, for one always has some clean gauze on hand, and using a fresh piece every time, insures cleanliness and avoids any possibility of infection.

The simplicity of this method is as advantageous to the patient as to the physician, for alarm is much less likely to be caused and fear more likely to be allayed by a plain gauze pad, than by the rather

* Read before the recent meeting of the North Carolina Medical Society at Greensboro.

formidable and elaborate apparatus sometimes employed.

The time required to bring an adult fully under the influence of the anaesthetic by this method, is about fifteen minutes, and the amount of ether required for this purpose is about four ounces.

I do not think I am wrong in saying that the general impression with regard to the cause of post-operative nausea and vomiting is that they are the result of the anaesthetic, just as post-operative pneumonia is so frequently and in most cases, if not in all, so erroneously attributed to the anaesthetic, when really these distressing after-effects are most frequently due to the constitutional effects of the operation itself, associated with the pathological condition present; the anaesthetic itself being as a rule, a very secondary aetiological factor.

We know that nausea and vomiting frequently occur after operations done under spinal anaesthesia. These are commonly attributed to the constitutional action of the cocaine used, or else to the interference with the normal relations of the spinal cord. Though I have had no personal experience with this method of anaesthesia, and have had no opportunity of observing its effects and the sequence of events, it seems to me highly probable that these after effects are in many cases, the reflex manifestations of the shock of the operation itself.

We also know that nausea and vomiting are among the well recognized symptoms of shock from accidental injuries, so why should this cause be eliminated when the injuries (operation) are intentional? Not that I wish to infer that shock as usually described, follows most operations, for as a matter of fact it is a comparatively rare sequel, but that there must be some systemic effect is only a natural deduction from our knowledge, imperfect though it be, of the extremely delicate and complicated workings of the sympathetic nervous system.

It is also a prevalent idea that nausea and vomiting are more likely to occur and be more severe after the use of ether than chloroform. This is a tradition that deserves very thorough investigation, and can be settled only by a careful study of a large number of carefully recorded cases.

I realize only too well, that the present number of cases is far too smalll to warrant any positive conclusions on this subject, but I am setting them forth with the hope that others may be led to make observations in the same direction, especially with regard to chloroform, for it is only by means of the careful record of many cases under different circumstances, that any final conclusions can be justified.

The results in this limited number of cases are at least suggestive, and though in some directions were anticipated, in others were somewhat of a surprise.

The majority of the cases came into the hospital the day before the operation and were prepared in the usual way, the bowels being well empted by laxatives and enemata. The ether was administered in the manner already described. In a very few cases, while "coming out" of the anaesthetic, but while still unconscious, the patient has vomited up some mucus collected in the stomach during the anaesthesia; the vomiting probably being the result of the reflex irritation of an undue amount of mucus in the pharynx and larynx; these cases in the classification, I have considered free from nausea and vomiting, for from the standpoint in question they were so.

I am not going to weary you with a lot of figures, but give you as few as possible, at the same time making my purpose clear. The operations I have divided into four classes, according to their nature, though of course a number of different operations have had to be included under one head. In many cases multiple operations were performed, such for instance as curettement, trachelorraphy, perinerraphy and hysterorraphy or oopherectomy and hysterorraphy with removal of the appendix. In such cases I have classified them as accurately as possible, making the greater include the less (though it is not always easy to decide which is the greater and which is the less), keeping in view the main object of being able to draw correct conclusions from the cases presented. The four different classes into which, for the sake of comparison, I have divided these operations, are as follows:

1. Dilatation and curettement of the Uterus.
2. Intra-abdominal operations on the uterus and adnexa.
3. Other abdominal operations.
4. All other operations.

In class 1, which includes also some cases of repair of the cervix and perineum, 84 per cent. suffered from some degree of nausea and vomiting.

In class 2, including hysterorraphies, hysterectomies, oopherectomies, removal of ovarian cysts, etc.; 76 per cent. suffered from nausea and vomiting.

In class 3, including operations for appendicitis, in some cases suppurative, with more or less peritonitis, cholecystotomies, exploratory operations, etc.; 52 per cent. suffered from nausea and vomiting. With

regard to the occurrence of vomiting in this class, in only about 16 per cent. was it marked enough to be worth considering, and in only 4 per cent. was it severe.

In class 4, among which are nephrorraphies and a number of operations on the male genito-urinary organs, 44 per cent. had some subsequent nausea and vomiting, but in less than 9 per cent. were these after effects severe enough to be worthy of consideration.

We thus see that the nature of the operation has a very important relation to the after effects. If we take all cases together we find that 34 per cent. were altogether free from nausea, and though vomiting occurred with almost equal frequency, it was only in 30 per cent. of cases that it occurred more than three or four times.

For the sake of comparison, I will mention the fact that of the 15 cases of chloroform anaesthesia, of which I have a similar record, including almost as many varieties of operations, only 25 per cent. were free from nausea and in only 38 per cent. was the vomiting inconsiderable.

If we take an average of the time the cases reported suffered from post operative nausea, we find that when ether was the anaesthetic, it was $5\frac{1}{2}$ hours, when chloroform was used, it was $22\frac{1}{2}$ hours.

Among the cases reported, there were two operated on at two different times, ether being used one time and chloroform another; the operations, each time, being of a similar character. The first case was one of varicocele, ether being the anaesthetic employed, no nausea or vomiting following. Two days later, on account of some bleeding, the wound had to be reopened and this time chloroform was the anaesthetic used; nausea and vomiting followed, and were severe for 24 hours and quite marked for 24 hours longer.

The second case was one of uterine dilatation and curettement, followed by hysterorraphy; ether was the anaesthetic used, for five hours after the operation nausea and vomiting were present to a moderate degree. About six months later the woman came back to the hospital for a second dilatation and curettement. At her own request, chloroform was given and nausea with vomiting followed, lasting for 36 hours.

In some cases nausea with vomiting did not occur for some hours after the operation, when it would be started up by drinking a few teaspoonsful of water, and in some cases last for hours.

The great difference in the frequency of post-operative nausea and vomiting in the different sexes is very striking. In this series, 70 per cent. of the males were absolutely free from these after effects, while of the females, only 16 per cent. were free. We should naturally expect the sex whose nervous equilibrium is more easily upset, to be more easily affected in this respectt but so marked a difference I did not expec, to find. Yet this great difference alone would indicate the fact so often overlooked, that post-operative nausea and vomiting are more the reflex manifestations of the disturbance caused by the operation, than the results of the anaesthetic itself, for if it were the anaesthetic alone there is no reason why, as with an ordinary emetic, the results should not be pretty much the same in both sexes.

Another striking fact, which also goes to show that the aetological part played by the anaesthetic is as a rule, secondary; is that the amount of nausea and vomiting has absolutely no relation whatsoever, to the amount of ether used. This is proved by the fact that the average quantity of ether used in all the cases in which there was no subsequent disturbance, was exactly the same as the average amount used in all cases in which such disturbance was present, viz: 9 ounces. The average time consumed in each operation was just under half an hour. The most serious cases of nausea and vomiting usually occurred in nervous and delicate women.

From this brief and incomplete report what conclusions may we draw?

1. That as a rule post-operative nausea and vomiting are less dependent on the anaesthetic than on other causes; of the predisposing causes sex seems to be the most important, for other things being equal, women are far more likely to suffer from these after effects than are men. What we speak of as a nervous disposition is also a strong predisposing factor; in one whose nervous equilibrium is on the balance, so to speak, the reflex after effects are likely to be more severe and prolonged. This was particularly noticeable in some of the cases of this series.

2. The amount of post-operative disturbance does seem to bear a more or less definite relation to the nature of the operation, and the operations which are most liable to be followed by this disturbance are those on the uterus and its adnexa, and of these the operation which causes this disturbance most frequently, seems to be dilatation. This may be due partly to the fact that women on whom this operation becomes necessary, have frequently suffered a great deal and their nervous equiiibrium is apt to be in a somewhat unsteady condition to begin with.

Next in order come oopherectomies, hysterorraphies, hysterectomies, etc.; then

other abdominal operations in which the uterus is not interfered with and least upsetting of all are operations in which neither the abdomen nor the female generative organs are attacked.

3. The common teaching that the administration of ether is followed by nausea and vomiting much more frequently and severely than is that of chloroform, is not borne out by these figures, but of course no great weight can be attached to conclusions based on so small a number of cases. The higher percentage in this series of those suffering from nausea and vomiting, when chloroform was the anaesthetic, and the two cases in which chloroform was followed by much more severe after effects than was ether, indicate that in spite of the fact that as a rule other things are more important than the anaesthetic in the production of post-operative nausea and vomiting, still the anaesthetic in some cases does play an important aetiological part, and that with some people the use of chloroform is more apt to be followed by these unpleasant after effects than is ether. That the reverse with some people, is the case, is also undoubtedly true.

4. The proper preparation of the patient has much to do with the after effects, and more important still, is the after treatment. Though in some cases it is an unnecessary hardship, it is a safe rule, at least after ab dominal operations, to keep everything out of the stomach for from 12 to 24 hours, for not infrequently several hours after an operation, the taking of even a very small amount of water will set up a very distressing nausea and vomiting, from which, up till that time, the patient had been wholly free. Though the number of cases is too small to justify many conclusions, one thing I think it does show and that is that the degree of gastric disturbance following etherization, has no relation whatsoever to the amount of ether used; the fact that the average amount used in all those who did not suffer from those unpleasant after effects, is exactly the same as in those who did, proving this conclusively.

The Dwarf Tapeworm—(Hymenolepsis Nana)—A Newly Recognized Parasite—Report of Case.*

By Henry F. Long, M. D., Statesville, N. C.

Hippocrates, the first of the great clinicians and masters of diagnosis, laid down the aphorism: "Experience is fallaceous and judgment difficult." In the (to me) interesting case I have the honor to call to your attention, the truth of this aphorism is most aptly proven.

About one year ago, Clara W., female, age 12 years, came under my care. Patient was a pale, slender, nervous, anaemic girl, exhibiting marked symptoms of Sydenham's Chorea, or St. Vitus's Dance. I prescribed arsenic, with other tonic treatment. Some months later she came under my notice again. The general condition showed no improvement, the nervous symptoms were still in evidence and the anaemia still pronounced. The immediate cause of this visit was to relieve a severe colic. She complained of severe pain in right iliac region, McBurney's point being very painful on pressure. Pulse 120 per minute; temperature 101½ F.; no constipation; no marked rigidity of right rectus muscle; no leucocytosis. Spts. Aeth. Comp. one drachm, repeated in an hour, relieved her of pain, but her temperature remained at 99 3-5 F. and so continued to show each afternoon for three weeks. The muscular contractions did not recur, but there remained decided tenderness on deep pressure over McBurney's point. There was gradual improvement of the general condition for two months, at the end of which time she suffered a second seizure of the abdominal symptoms. This yielded to treatment only to give place to third and, later, a fourth attack, all with similar abdominal symptoms. The fourth attack, the most severe of all, was followed by an epilepti form convulsion. Although I could not demonstrate all the classical symptoms of appendicular colic, I decided that the recurrence of the attacks, coupled with the symptoms outlined, fully justified a diagnosis of appendicitis. I gave this diagnosis and advised an operation, which was consented to by the parents of the patient. Preparatory to the operation the urine was examined with negative results.

By reason of the fact that the case was an obscure one, there being a paucity of definite, decisive symptoms, I decided to have the feces examined microscopically. My friend, Dr. F. L. Sharpe, made the first examination and found what he was certain were tape worm eggs. I made a number of examinations but could not determine whether the specimens were tape worm or hook worm eggs. A specimen was sent to my friend, Dr. H. C. Cowles, a bright young North Carolinian, now practicing medicine in New York City, with the request that he examine, and if at all in doubt, to have the best man he knew of examine, and if possible, classify the eggs. In reply Dr. Cowles said, "that he had examined the specimens, but being unable to determine the species of eggs,

*Read before the recent meeting of the North Carolina Medical Society at Greensboro.

referred the problem to Prof. Bastido, who was unable to classify the eggs, but was inclined to think they were hook worm eggs. Was certain they were not tape worm eggs." At no time did any specimen of feces show any tape worm segments. The only foreign body found under the microscope being the afore-mentioned eggs. A specimen of feces was sent to Dr. Charles Wardell Stiles, of the Public Health and Marine Hospital Service, at Washington, D. C., who made an examination and sent me the following report of the results of his examination:

"Sir: The specimen mentioned in your letter of March 30th, has been duly received. An examination shows it to be a light infection with the dwarf tape worm, Hymenolepsis nana. I enclose herewith reprint of a short discussion on this parasite. You will find a more detailed discussion in Bulletin No. 18, Hygienic Laboratory, U. S. Public Health and Marine Hospital Service. Application for this bulletin should be made to the Surgeon-General of the Service.

Respectfully,
Ch. Wardell Stiles,
Chief of Division of Zoology.

As a result of these examinations I gave the patient the following treatment: All food interdicted and only water allowed for twenty-four hours; then exhibited an oil purge; following this I gave one drachm of oleo resin of male fern, repeated in one hour, followed by an oil purge. After the administration of this treatment, the eggs disappeared and although the feces were examined twice a week, showed negative results until three weeks had elapsed, at which time they again appeared in the feces. The same treatment was administered, and the eggs again disappeared. Another specimen was sent to Dr. Stiles and the following reply was made by him.

"Sir: I am in receipt of your letter of May 5th, and also the fresh specimen. Ten preparations of the specimen have been very carefully examined and no eggs were found. I am inclined to think that your three treatments, which you mention, have been followed by good results. It is not surprising that the tape worms were not found in the stools, especially if you did not examine them personally. The dwarf tapeworm, you will recall, is very small, and is somewhat difficult to find.

Cases of this kind are sometimes practically cured but the eggs appear again in the stools after several weeks. This is possible because at the time of treatment some of the larval stages of the tapeworm may be in the villi of the intestine. They, of course, would not be expelled by the drug, and then upon reaching the lumen of the intestine they would develop in the adult form and thus produce eggs. There is no question whatever regarding the original diagnosis, as it was made by three separate men, Dr. Goldberger, Mr. Garrison and myself, so I think that the whole trouble is that your treatment was successful, and that the worms escaped unnoticed. I shall be pleased to examine further specimens in case you care to send them to me. If you happen to have any severe cases of hookworm disease on hand, would it be possible for you to obtain some fresh feces for me as I wish some for experimental purposes.

Assuring you of my highest esteem, I remain,
Ch. Wardell Stiles,
Chief of Division of Zoology.

At the present time the patient has gained many pounds in weight, the anæmia has disappeared. She has regained her color, the nervous symptoms have disappeared and menstruation, which had never before appeared, has been well established. In fact, a return of perfect health had been accomplished. The cause of the pain and suffering and ill health of the little patient, the dwarf tapeworm, or Hymenolesis nana, was first described in France in 1845 as a parasite in the brown rat. Since the early observations it has been shown that the dwarf tapeworm occurs either in man or in rodents or in both. About 100 cases in man have thus far been recorded, most of the patients being males and the large majority children, commonly between the ages of five and ten years. In his report on the dwarf tapeworm Dr. Stiles says that "since September, 1902, my division of the Hygienic Labratory has examined about 3,500 patients for intestinal parasites and we have found the dwarf tapeworm sixteen times, while the beef measle tapeworm, Taenia Saginata, which is the common tapeworm of our pathological collections, has been found but twice, and we have not had a single case of Taenia Solium, which, according to many authors, is the most common tapeworm of man in this country."

Dr. Stiles further says that the regular channels through which man becomes infected by this parasite have not been established through direct observation, but are deduced from certain general facts. It seems probable that rodents, especially rats and mice, are the regular hosts for this worm, and it is known that in certain habitations rats and mice visit the pantries and food, as for instance, bread? Such visitation is especially likely to occur in houses of poor construction. By this

means, the eggs of the tapeworm may be spread to the food through the droppings of the mice and rats and infect man.

The dwarf tapeworm inhabits the ileum and there may be a single parasite or several thousand specimens present in a patient. The symptoms produced by the dwarf tapeworm are usually slight, but severe symptoms, such as persistent diarrhoea, epilepti form attacks, severe nervous symptoms and even convulsions may be produced.

The dwarf tapeworm, as its name indicates, is a mere Tom Thumb compared with the other varieties of tapeworm. It measures from one-fifth to slightly less than two inches in length. It has four suckers on the head and the genital pores are lateral. The head has a crown of hooks which are single, those of other forms of tapeworm being double. Being very delicate and likely to be broken in pieces, it is a difficult matter to discover specimens in the faces, unless passed in large numbers.

The mode of development of the tapeworm is, briefly, as follows:

The eggs, containing six-hooked embryos, pass out of the body of the definitive host in the feces. To develop further they must be taken into the alimentary canal of some other animal. If conditions are suitable in this animal the embryos, after hatching, bore out of the alimentary canal, and encysted somewhere in tne tissues of the body, develop into the intermediate or cysticercoid stage. When this animal, the intermediate host, is eaten by an animal which can act as a definitive host, the intermediate stage continues its development and becomes transformed into the adult worm, which produces eggs, thus completing the cycle. As one would expect, the normal intermediate host is an animal which is the natural food of the definitive host, or otherwise likely to be taken into the alimentary canal of the latter. The meal worm and similar insects are supposed to act as the intermediate hosts in the development of the parasite. Experiments along this line have resulted in a demonstration of the fact that the eggs of the dwarf tapeworm from one rat when fed to another develop into mature worms in the intestine. The rat was thus shown to act not only as the definitive host, but also as the intermediate host, and it is not beside the facts to believe that man may also act as host in a similar way, and complete the cycle in his own alimentary canal.

To make the microscopic examination it is necessary simply to rub up with a drop of distilled water on a glass slide, a very small particle of the feces to be examined, cover with a cover glass and examine with a moderately high power. Some care is requisite in looking for the eggs of the Hymenolepsis nana, because of their great transparency.

Male fern is the only remedy which has met with any degree of success in the treatment of the dwarf tapeworm, the preparation to be employed is the official oleo-resin (Ole-resina aspidii, U. S. P.) or the ethereal extract of the European pharmacy, which must be fresh to be effective. Care should be taken to have the patient in the best possible physical condition, and preceding the administration of the taeniacide by a preparatory treatment of mild laxatives and a light diet in which the amount of starchy foods is reduced to a minimum.

After the preliminary treatment the male fern is given in the morning upon an empty stomach. A number of small doses at intervals may be given, or one, two or three larger doses, the latter procedure being preferable. One treatment does not always suffice, and repetitions at intervals of about fifteen days will often be found necessary.

As to prophylaxis, Blanchard epitomizes the subject of prophylaxis in the following words:

"From whatever point of view examined, the great problem of the suppression of parasitic diseases, whether they be infectious or not, is summed up in this formula: Cleanliness, always cleanliness."

As far as possible banish rats and mice from the premises, and keep food out of their reach, especially food that is eaten raw, or after cooking is kept for some time before being eaten.

From the experience gained in the foregoing, it is borne in upon one that every case should be treated upon its own merits, and a seeming preponderance of evidence should be thoroughly sifted, no diagnostic measures should be neglected, and all tests, especially the highly satisfactory evidence of the microscope, should be applied in every case. A series of cases should not be allowed to influence the judgment, or prejudice to a hasty diagnosis, because some of the symptoms seem to be characteristic. The absence of several clinical symptoms, no matter how seemingly clear those found, should put one on his guard, and every test should be applied. The services of the microscope, that powerful, tireless assistant, that sure and certain aid to diagnosis, which never speaks in uncertain or obscure terms, should be constantly consulted, even though only for confirmation; for occasionally it does not confirm, but points indisputably to the obscure but real trouble, and, in cases where such is possible, to the road which intelligently

followed. leads the patient and physician out of the quagmire of disease on the highlands of health and happiness.

A Case of Dextro Cardia.*

By Lynn McIver, Sanford, N. C.

Lorenzo Miller, aged 36, colored. Father died of typhoid fever. Mother died of tuberculosis. Has four brothers and three sisters in good health and one sister and two brothers died of tuberculosis.

Has had ordinary diseases of childhood, also diphtheria.

While driving ice wagon in Greensboro in 1894 train ran into wagon, resulting in a wreck. Has had right collar bone broken, injured spine.

Afterwards was in race for championship of State in bicycle riding. Won it but says that he has never been strong since that time.

Had an attack of inflammatory rheumatism following this, lasting 9 months. Was in bed most of the time. In about 1 year had skin trouble and sore throat. Took treatment at Hot Springs, Ark., 4 months and came away relieved. Had an attack of malaria in summer of 1900–1901 and 1902.

In summer of 1901 was Pullman porter on N. Y. Central R. R., was in head-on collision but not injured except shock. While in N. Y. City that year had an attack of unconsciousness and was taken up by ambulance and to the hospital intern discovered the heart abnormality.

Several of these unconscious attacks occurred afterward but none in the last 2 years.

In July 1902, went on merchant vessel from N. Y. to London and while there had an attack with spine but only lasted few days.

He sailed more or less all over the East when coming back to North Carolina in 1904, and since that time has been in feeble health. Since January, 1905, has had pain and soreness in right mammillary region and shortness of breath and some pain in back. Called in Dr. H. B. Hoyle of Jonesboro, to whom we are indebted for this case.

Physical Examination.—Chest measure 33 inches, apex beat 2 inches below and 2 inches to inner side of right nipple. Slight sensation over normal pulmonary region.

Percussion.—Dullness beginning at 4th inter-castal space on right side and extending into liver dullness. Dullness extending to the right and a little beyond the right mammillary line, on the inner side to the sternum. Slight dullness over normal region on left side on palpitation.

Osculation.—On an oscultation mitral sound 2 inches below and 2 inches to inner side of right nipple. Slight sound to left in normal position and feeble sounds in normal pulmonary region and aortic sound nearly normal.

Diagnosis.—Congenital Dextro Cardia.

*Read by title before the recent meeting of the N. C. Medical Society at Greensboro.

Visceroptosis.

McCallum (Brit. Med. Jour.) says that these patients should be put upon a modified Weir Mitchell treatment. The frequency of these ailments is startling. Over 90 per cent. of the cases of neurasthenia in the female are victims of visceroptosis. This disease is less prevalent in the male neurasthenics. Clinically, the etiological factors of importance are: bad standing posture, badly fitting garments, imperfect use of the lower zone of the thorax, absence of fat and want of tonicity of the abdominal muscles. Tayloe and Keith were the first to point out that the origin of this disease begins in a faulty position and use of the thorax. On account of the backache and pelvic dragging, the symptoms of visceroptosis frequently point to the gynecological lesions. Unfortunately, however, it is not alone the uterus which is tilted back and in disorder. This is but a small portion of the evil condition existing. The skin of these patients is usually peculiarly atrophic. It is free from fat and devoid of elasticity. It is well known that dermatographia is a characteristic stigma of neurasthenia. The lower zone of the thorax falls in. It is unquestionably the shape of the thorax that has to do with the condition. The abdominal cavity can be conceived of as a joint. The health of the cavity can be fairly well gauged, as in the case of the joint, by the tone of the muscular covering of that cavity. The treatment of these cases should obviously begin early. Meek has well said that their cure should begin before they are born. In other words, everything possible should be done to develop the chest; for the acute attack typical Weir-Mitchell treatment is indicated. Hemoglobin should be carefully studied as well as the percentage of erythrocytes. It is well known that these increase more or less in proportion to the increase of body-weight. The distribution of fat in the male and female is different, the male carrying his on the shoulders, neck, back and abdominal cavity, the female carrying hers in the breast, buttocks and thigh. A departure from this type should arouse suspicion of arterial sclerosis. Massage promotes muscular development by increasing muscular feeding. It not alone assists the patient to get control of the lower neurons, but of the upper neurons as well. On account of the lesion of the thorax, it is not uncommon nor unlooked for that phthisis and visceroptosis should often run hand in hand. Indeed, they are combined in about 50 per cent. of the cases. Hydrochloric acid, in the opinion of the author, is most frequently diminished in dilatation of the stomach.

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ULCERS OF THE LEG AND FOOT.

The most common ulcer met with in this location is the varicose ulcer, accompanied with varicose veins. They are most commonly found on the internal and anterior aspects of the lower part of the leg and around the ankle The varicose veins produce a stagnation or passive congestion of the capillary districts involved. The surrounding tissues become saturated with a thin serum which oozes through the walls of the capillaries and small veins. This causes oedema of the parts. With the serum there is an exudation of the red blood corpuscles which break down and leave an extensive pigmentation or bronzing of the parts. The nutrition of the tissues is enfeebled and the oedema causing a softening of them. A small abrasion occurs finally as the result of friction or some slight trauma or a thrombosis of one of the superficial veins produces a slough and the minute wound thus made is unable to heal. The surrounding parts are infiltrated and more or less infected with organisms and are further softened by a continuation of the inflammatory process now developed. These ulcers enlarge gradually and at times an acute inflammation may supervene, accompanied by phebitis of some of the larger superficial veins. The ulcers are occasionally of great size and may girdle the limbs. When neglected, as they often are, in aged and infirm people who are unable to submit to treatment, they become extremely foul and are covered with a rind of increased and decomposing tissue.

The next most common ulcer in this location is, perhaps, the syphilitic ulcer the location of these ulcers are generally about the knee-joint or on the posterior surface of the leg they have a surpiginous outline and a sharp edge with a sharply punched out appearance. Ulcers due to involvement of the bone are generally very tender, and if a probe is passed, can feel the dead bone.

The perforating ulcer of the foot appears on the under side of the foot is funnel-shaped with indurated edges and generally appears in the old and debilitated.

The treatment of varicose ulcers, as in many diseases, consists in relieving the cause. If one can confine the patient in bed and elevate the limb and keep it clean the oridinary ulcers will soon heal, but usually the patient is not willing to take the time for such treatment. In this case it is best to dress the ulcer with some good simulating and antiseptic dressing Balsam of Peru answering the purpose usually and then apply strips of adhesive plaster from the foot to the knee, applying them in such a way that you have the most pressure around the ankles and gradually reducing this pressure as you go up. By this procedure the varicose veins of the skin are supported and conjestion and stagnation is overcome and the excess of blood passes up by the deep veins. As soon as the ulcer heals it is advisable to put on an elastic stocking which fits exactly and have the patient wear this all the time that he is up and about. Some of the larger and more severe ulcerations where a large area of skin is destroyed can save time by curetting away the old granulations and then do a skin grafting and place patient in bed for three weeks with part elevated. The dressing used or the antiseptic does not make a great deal of difference, it is the elevation and keeping the part clean that does the work. These cases are found mainly in persons whose occupation require them to be on their feet most of the time.

The eczema which accompanies the ulcer or often precedes the formation of the ulcer is best treated by a rubber bandage applied as before described. Many of the cases which have been long neglected have most exuberant granulations, which at first sight might lead one to the diagnosis of some malignant condition. But the history of the cases and the varicose veins present decide the diagnosis. When the ulcer surrounds the leg and cuts off all the superficial veins the ankle and foot is swollen and oedematous, many of these cases get along well when curetted and skin graft is applied.

ALCOHOL.

Alcohol, when used as a drug in proper amounts and in certain conditions, is a fair remedy. Liebig, previous to 1860, classed alcohol as a carbohydrate food; since then, Lallemand and others, apparently demonstrated that alcohol was eliminated from the system in an entirely unchanged form and could therefore not be considered a food. Later it has been proven that Lallemand's experiments were carried out by giving excessive doses of alcohol and thus was able to recover alcohol in the urine. Binz and his pupils using small doses of alcohol only recovered 2 to 4 per cent. of the alcohol ingested. They concluded that the difference, 96 to 98 per cent. was retained and oxidized in the system and that alcohol was therefore a true food.

The results of Dr. Goddard's experiments which seem to be more elaborate, prove that 95 per cent. of alcohol taken into the sys-

tem in small doses is used as a food, and that no aldehyde or other alcohol derivitives are found in the expired air in the urine, in the blood, or in any part of the body of the animal after death. If given in large doses 50 per cent. is excreted from the system. These experiments, therefore, point out that there is a very wide difference between moderate use and abuse.

Alcohol in the form of whiskey is often advocated as a hypnotic in the acute infective fevers, it is as a rule uncertain, but in a few cases acts well. In the treatment of typhoid fever it has a very limited use. It is not a heart stimulant proper, but may be so indirectly like morphine, or any drug that has a tendency to quiet the nervous system. In some cases that are very nervous and restless and wakeful, whiskey will quiet and soothe when nothing else seems to do well, and may also quiet the delirium when other means fail. These cases are very few for as a rule it causes more nervousness, more irritability, more insomnia and more delirium. If it produces sleep and quiet and moisture of the tongue it is indicated. Usually it makes the tongue drier, tends to wakefuiness, restfulness and delirium. In severe hemorrhages or in perforation, or in fact, anything that causes a sudden depression of an already enfeebled condition, alcohol might be given to advantage. When the nervous system has become exhausted and muscular weakness has come on gradually and is well marked, alcohol is not of much value. A fever patient who has passed the age of 45 requires more whiskey than younger subjects, and if the patient has been in the habit of taking a great deal of whiskey prior to the attack of fever, it should not be withdrawn abruptly, but continued as case indicates. In people past middle life, and especially in the aged, strychnine and whiskey are of great value. A great deal of injury is often done in giving young people alcohol in the active fever stage. Cases of fever where fright and worry and anxiety are about to jeopardize the patient's life, nothing seems to act better than a good drink of whiskey occasionally. It does away with that feeling of disquiet and that feeling of fear and danger that often saps a great deal of the vitality of the patient. It is in this class of cases that we are often deceived about its real value as a heart stimulant. We find here a fast, irregular and weak pulse, a good dose of alcohol will make it full, regular and slow. Morphine would have the same effect, but it is not as desirable for reasons well known. Iced champagne will often relieve nausea when all other remedies fail.

In those acute conditions, as in pneumonia, when alcohol is given in a routine manner from the first for the purpose of keeping the patient quiet and stimulating the heart you find that the residual heart action has been used up and at the time of the crisis when the heart is called on to do an undue amount of work it fails the same as an overworked horse that has been driven too hard cannot draw his load over the hill. It is, therefore, better to use the alcohol only when the signs of muscular weakness and exhaustion present themselves and thus in this way tide the patient over the crisis by using your stimulants to whip up the residual force which has been retained rather than exhausting this residual force unnecessarily before it is actually needed.

As a diuretic alcohol in the form of gin does very well, if its use is not continued for too long a time and the doses are not too large.

In regard to the abuses of alcohol, one finds in looking over the causes of the various diseases alcohol among the list of causes very often. This has been considered a direct cause of many diseases. Recently Beaux, of France, by his experiments on animals has produced in them a typical hepatic cirrhosis by simply feeding them on the by-products of intestinal fermentation, viz: acetic bacteric and valerianic acids. If this be true then why are not the other diseases caused in the same way? Not necessarily by the same by-products but various ptomaines which may be formed by the interference of the digestive process, varying with substances fermenting and with the different condition of the patient. These experiments of Beaux have opened, or at least called attention to a line of investigation which may in the near future produce results that will entirely change our present ideas on the subject of direct cause of certain diseases which are at present quite inaccurate.

In an article in the Post-Graduate, Dr. Joseph Collins states that the intemperate use of alcohol is directly or indirectly the commonest cause of insanity. In fact, it is so nearly the sole cause, that if alcohol could be stamped out for a century insanity would undoubtedly shrink 75 per cent. This statement includes the assumption that alcohol is the most potent cause of poverty that syphilis, from which a well defined form of insanity general paresis—flows has a direct relation to alcoholic intoxication; and that disharmonies of somatic and psychical development during the formative stages of the individual (i. e., pathological heredity) are more directly traceable to abuse of spirituous liquors than to any and all other causes. The writer points out, however, that it is not so much the amount of alco-

hol that a person consumes, as it is the individual who consumes it that stands in causual relationship to insanity. The personal equation must always be considered in studying the effects of drink. Among the forms of insanity directly traceable to the abuse of alcohol are Korsakoff's psychosis, confusional insanity, pseudo paranoia, acute alcoholic mania and pseudoparesis.

SCURVY AND RACHITIS.

Although the practitioner at this season of the year is most interested in the treatment of diarrhœa and proper diet for infants, it is always well to keep in mind the early signs of scurvy and rickets in these young children. The fact that an infant has reached its 9th month without a tooth is regarded by Sir Wm. Jenner as a reliable sign of rachitis.

In order to determine whether rachitis incipient or of a mild form be present, all the signs should be considered—the fretfulness, free perspiration upon the head, neck, face and chest, the tenderness of surface, anema and general deterioration of health, delayed dentition, swelling of the joints, craniotabes, bending of the long bones, rachitic rosary, misshapen head, prominent frontal and parietal bones, deformity of thorax with depression of the ribs, projective or misshapen sternum and prominent abdomen with Harrison's groove. All these signs must be taken into consideration before making a diagnosis of mild or incipient richitis. When craniotabes is well marked, so that by gentle pressure on the skull, especially over the parietal and occiptal region gives the feeling of a crackling sensation same as when you dent cardboard, with the other signs, the diagnosis is not hard to make.

The characteristic symptoms of infantile scurvy are the swollen, spongy, purple and easily bleeding gums and external pain on motion, tenderness, swelling and inability in one or both lower extremities. On examining the long bones of the extremities will find a cylindrical swelling which is due to a subperiostal hemorrhage. The limbs are held in a semiflexed position and may be mistaken for paralysis. Subcutaneous eschymoses are not uncommon, and more often seen about the orbit, giving the little patient a typical black eye. For weeks before the development of the evidences of scurvy, the patient may suffer with vomiting, colic, diarrhœa, or constipation. But scurvy may develop in children who have not suffered from any gastric disturbances but are well nursed and ruddy.

Rickets and scurvy are both developed during infancy. Improper diet is a causative factor in both, but either may be developed without the other. The lesions of rickets are found in the bones and are more or less permanent, while those of scurvy are in the blood vessels which as soon as relieved the effused blood is absorbed. Scurvy and rachitis are not found only in the children of the poor, but are also found in rich and well-to-do families, the latter cases are generally due to too much improper artificial foods.

NORTH CAROLINA STATE MEDICAL EXAMINATIONS.

At Greensboro this year the State Examination Board gave their examinations consisting of seven written examinations and two oral in three days. This necessitated three written examinations in one day. Although this may be most convenient for the board it seems to be especially hard on the applicants. Many of the men who take the examinations have just been through their final examinations in their respective colleges and come a long distance and are not in the best of condition to stand the examinations and then to impose three examinations in one day is, we think, assuming too much. In most of the other States and especially New York State, two examinations are given each day, but ten examinations are given in all, this takes a full week. When one considers that a man has devoted four years of hard work in preparing for this examination and the result of his labors are to be weighed and passed on in three days, it does not seem fair.

A man who fails to pass must seek other States; this is often times a great hardship because many of these young men have been sent to college by parents who have to deny themselves of almost everything in order to educate their son. Again, some of the candidates have educated themselves, and have perhaps spent their last dollar, and then being turned down by the board are, indeed, in a sorry plight. It seems that it would be better for all concerned if only two examinations were given each day and five days were used for that purpose.

IMPORTANCE OF EARLY DIAGNOSIS IN LOGOMOTOR ATAXIA.

Although locomotor ataxia is considered an incurable disease, there is no doubt that by proper treatment the destructive process going on in the spinal cord, causing the various symptoms, can be checked, or at least, held in abevance by proper treatment, if taken early. It is, therefore, important to make the diagnosis in the incipient stage before the motor symptoms or ataxic stage is reached. The pain in this stage is of a sharp, stabbing character, most common in

the legs, may be associated with hot burning feeling occasionally may have herpes develop at sight of pain. They occur at irregular intervals, coming on after excesses or impaired health. May have gastric crisis and parasthesia and at times a sense of constriction about the body. Optic atrophy may be the first symptom and usually leads to total blindness. A double and single ptosis, one or more muscles of the eye may be paralyzed, then patient complains of seeing double; also have Argyll Robertson pupil.

The first warning of the disease which the patient has may be a certain difficulty in emptying the bladder, Decrease in sextual desire may also be an early symptom.

The loss of knee-jerk is the earliest and most important sign and may occur years before the development of ataxia. The combination of loss of knee-jerk, especially with lightening pains and Argyll Robertson pupil are particularly diagnostic.

A patient taken in this stage of the disease and treated with gradually increasing doses of strychnine will at least postpone the more distressing symptoms which follow in the later stages of the disease.

DR. STUART McGUIRE.

Upon the resignation of Dr. J. Allison Hodges, President of the University College of Medicine of Virginia, Dr. Stuart McGuire, son of the original president, Dr. Hunter McGuire, accepted the presidency, which was offered him by the board of directors.

Dr. Stuart McGuire, although not yet 38 years of age, has a high reputation as a surgeon and is well known to the profession throughout the country. He was educated at the University of Virginia. At the death of his father, Dr. Hunter McGuire, Dr. Stuart McGuire took over the private hospital (St. Luke's) and since then has given his entire time to surgery.

Under the heading of "The Chicago Octopus," the reader will find some facts stated by Dr. Daniels, editor of the Texas Medical Journal, in regard to the aims and methods of the Journal of the American Medical Association, and especially in regard to its present editor. From this as well as other editorials which have appeared recently in the various independent journals, we are led to believe that the editor of the American Medical Journal is the commander and chief of a trust which, if their present plans mature, bids fair to rival some of the present trusts in the business world. He, as you know, is the editor of the journal which is the official organ of our National American Medical Association, whose duty should be to so conduct the work of the journal and make our national association one of the foremost scientific and ethical organizations in the world, rather than simply use the association as a cloak or shield to carry out plans which are intended to promote certain selfish interests of a chosen few. That our national association should be in the hands of such a ring, is indeed, most deplorable, especially when one thinks of the character and strength of the present British and German National Associations. These nations have a tendency to look upon us as less scientific and less ethical than physicians of their respective countries. It is just such conditions as these above referred to that will tend to bring us into disrepute in the eyes of other nations. If the National Association could get rid of this present ring and have an official bulletin like the Johns Hopkins Bulletin and not have a journal and editor and a ring of grafters, supported entirely by a system of patent medicine advertisements, it would immediately receive the heartiest support and confidence of all the independent medical journals in this country.

Review of Southern Medical Literature.

Memphis Medical Monthly, May, 1905.

Facts vs. Theory in Treatment of Pneumonia.—Dr. J. L. McLean, after reviewing the various text-books, says that the weight of opinion of the present day is in favor of the idea that pneumonia is a self-limited disease which carries with it the routine symptomatic treatment which is virtually a do-nothing treatment, in so far as the specific lesion is concerned.

The treatment advocated by the leading authorities of to-day is simply a supporting one with the use of strychnine and digitalis as indicated to sustain the heart action, morphine hypodermically to control pain and leave nature to combat the disease. Nearly all authorities claim that pneumonia is produced by the pneumococcus and rest upon this theory that it is a self-limited disease uninfluenced by treatment terminating by crisis from the 7th to 9th day, possibly earlier, but much more frequently later and with an average mortality of 25 per cent. Pneumococcus is found in the air passages of healthy individuals and in the following locations in disease: pleura, pericardium, endocardium, peritoneum, meninges, kidney, and in the joints; and in fact, nearly all the tissues of the body. Sajous calls attention to the fact of pneumonia being produced by other bacteria with the same anatomical lesions and not different in many respects from the cases supposed to have

been produced by the pneumococcus. Therefore, there seems to be good ground for believing that the presence of the pneumococcus in pneumonia is a coincidence and not an exciting cause. An experience of 25 years in the treatment of this disease under the most unfavorable as well as the most unfavorable circumstances, in the hut of the poorly provided negro as well as in the homes of the well-to-do people of the town and country, has led me to believe that this modern idea of self-limitation, and as a consequence do nothing treatment is a fallacy and that its teachings are causing a death-rate in pneumonia of from 20 to 40 per cent. when it should be less.

It may seem strange in this enlightened age for any one to advocate a routinism in the treatment of any disease, but at the risk of being considered out of date, my experience in the treatment of pneumonia causes me to advocate principally a routine treatment in contrast to the routinism do-nothing treatment of the modern text-books.

This routine treatment consists in the application of a freshly spread blister of the ung. cathardes over the whole area of dullness as soon as the diagnosis is made as an abortive measure and not in the third stage as a dernier resort, as blisters have been used from time immemorial.

Calomel in small doses until the portal circulation is relieved and the bowels thoroughly unloaded and some expectorant, either carbonate or muriate of ammonia with digitalis, if indicated, to promote the expectoration and enable the patient to get rid of the tenacious mucus as it accumulates in the air passages, my experience has been that as soon as the blister begins to take effect the pain becomes less, the respiration easier and less hurried, the fever begins to subside and in a large majority of cases there is a decided amelioration of all the symptoms. Of course, the patient should be supported and given strychnine hypodermically, if needed, to sustain the heart action. The application of the blister in most instances obviates the necessity of hypodermics of morphine to relieve pain.

Lobar Pneumonia and Its Sequelae. Report of Cases—By Dr. Wm. T. Black.

Ulceration of the Cornea in General Diseases.—By Dr. E. C. Ellett, Memphis.

Cough from Causes Outside of Lungs.—By J. W. Price, M. D., Memphis.

Mobile Medical and Surgical Journal, May, 1905

Recent Developments in the Study of Diarrheal Diseases of Infancy and Childhood.—Dr. S. W. Welsh says that during summer of 1903 an investigation was made in the study of sick children in Boston, New York, Philadelphia and Baltimore. The harmony of the findings of these different workers is a tribute, not only to the accuracy and efficiency of the work done, but also to the master mind that formulated the plans for the investigation. About 600 sick children in the above named cities were examined by half a dozen expert bacteriologists. The bacillus dysenteriae was found in the dejecta and mucus membrane of the bowels of about 425 of the 600. The harmony of findings of four cities justify the conclusion that the bacillus dysenteriae is distributed all over the country, and that the dysentery of childhood is a distinct disease, agreeing essentially in pathological findings and etiological factors with the dysentery of adult life. It is also demonstrated that fully one-half of all the intestinal disturbances formerly variously called chronic indigestions, entero-colitis, etc., are due to the infection of the dysentery bacillus. There were several varieties of the bacillus dysenteriae isolated, all agreeing morphologically, but possessing essential differences. As regards its mode of entrance into the body it is not known, but wherever there was an over-crowding the disease spread rapidly. Death in these cases was due to some toxic principle rather than to gross lesions of the intestines. The disease being an infectious one while the mode of entrance into the body is not yet proven when we find a case of dysentery the nurse should be instructed to disinfect every napkin promptly, as well as her hands. The napkin should be dropped into bichloride or formaline solution as soon as removed, and nurses hands immediately sterilized. The child should be isolated as far as practicable and the apartments, furniture and toys carefully disinfected when the attack subsides.

Although the antidysenteric serum did not prove as successful as was expected, still it is thought that if given early it would be of great benefit. It should be given in 10 or 20 c.c. doses, not waiting for a bacteriological diagnosis. If the disease is encountered in a child well nourished and strong, the indications are plain and result satisfactory; but on the other hand, if the disease is met as a complication or intercurrant attack in measles, chronic indigestion, catarrhal pneumonia, or any other illness that has taxed the child's strength to the limit, we have a very different problem on our hands, or if we do remove the bacilli and neurtralize the poison, we still have a grave condition of shock to the vital centers to combat.

Texas Medical Journal, May, 1905.

This issue contains the report of the

thirty-seventh annual meeting State Medical Association of Texas, held at Houston, Texas, April 24-28, 1905, with the individual photos of the various officers of the association.

The Medical Recorder, May, 1905.

Appendicitis: Its Etiology, Symptomatology, Diagnosis and Conservative Treatment.—By Dr. M. Smith, Sulphur Springs, Texas.

The American Practitioner and News, May, 1905.

Caesarean Section for Myoma-Uteri Obstructing the Entire Pelvic Outlet.—By Dr. Fouche Warren Samuel.

The Southern Clinic, May, 1905.

Why Does the Southern Negro Escape the Ravages of Syphilis.—By C. A. Bryce, Richmond, Va.

Southern Practitioner, May, 1905.

This issue contains an abstract of the proceedings of the Seventy-second Annual Session of the Tennessee State Medical Association, held in Nashville, April 12-15, 1905.

Maryland Medical Journal, May, 1905.

The Early Diagnosis of Pulmonary Tuberculosis.— By Wilbur P. Stubbs.

Virginia Medical Semi-Monthly, April 21, 1905.

Circumcision: Its Technique, Anesthesia, Operation, After-Treatment and Report of Cases.—Dr. Ernest A. Timmons, after describing the technique, says the technique having been made according to the healthy or diseased condition of the case, the tourniquet next is tied around the penis near the latters root. Nothing answers better for a tourniquet than a medium sized male urethral rubber catheter. It should be placed at this stage to close out the systemic absorption of the local anesthetic and to prevent the latter's constitutional effect. When this is done the time to anesthetize is at hand. To produce local anesthesia so as to get parts perfectly painless to the operation is, what for a long time puzzled me. I at first used 4, 5, and even 6 per cent. solution of cocaine, both hypodermically into the foreskin, and externally around the cervix glandis. This gave total anesthesia of the integument of the dernia, but the muco-prepuce continued to give more or less pain on amputation, trimming and suturing. I then resorted to chloretone, locally, hoping for better results. But I got no more satisfaction, if as much, than I secured with my first effort,

After giving all of these procedures a fair and impartial trial and my patient's more or less pain, it seemed that my long sought for attempts were in vain. However, the thought came to me: Oculists use the crystals of cocaine for eye work. By this means they obtain a complete anesthesia, so that eye operations are made painless.

Now the muco-prepuce is no more sensitive than some of the tissues of the eye. This being true, a somewhat similar procedure properly carried out, ought to give similar results upon the muco-prepuce. So I tried the suggestion. I first placed a number of crystals of cocaine around the cervix glandsand upon the muco-prepuce. I waited fully 6 or 8 minutes for their absorption before using the hypodermic solution. The moist mucus membrane absorbed the crystals readily. I made five or six injections (4 per cent. sol.) through the integument and around the penis just back of the cornea. I gently massaged the area until the injections thoroughly met and mingled. I waited about five minutes until no pain was produced by pricking the foreskin. This gave about 12 or 14 minutes for the crystals to cocainize the mucus surface. Having previously prepared the instruments, sutures, etc., there was nothing to do but to proceed rapidly and uninterruptedly with the operation. So far as the patient is concerned in this procedure, they laugh and talk the same as if they were in a barbers chair having their hair cut. After this, the author describes the operation, after-treatment and reports a number of cases.

Virginia Medical Semi-Monthly, May 12, 1905

Case of Abscess of the Lung—Operation with Recovery.—By W. D. Travis, M. D., Covington, Ga.

Pernicious Malarial Fever with Special Reference to the Hemorrhagic Types. Report of Cases.—By Dr. W. L. Crosthwait, Holland, Texas.

The Virginia Medical Semi-Monthly, May 26, 1905.

Origin of Tuberculosis in Children.—Dr. Robert W. Hynds believes that the percentage of tuberculosis in children varies widely in different localities. Its great prevalence in children during the milk-drinking age and the predominance of other types than the pulmonary seem to indicate bovine origin. Out of 300 cases of tabes mesenterica observed by Raw, not one was in a child fed entirely upon breast milk, but all of them wholly or in part had been given cows milk. In communities where the milk was fed boiled or pasteurized, the percentage of intestinal tuberculosis is less than in those where it is fed raw. Helle cites an instance of this in the greater prevalence of tuberculosis around Keil than in Berlin.

The transmissibility of bovine tuberculosis to man cannot be established by direct

experimentation, but a sufficient number of cases of accidental inoculation have taken place to prove this beyond a doubt.

The study of the difference in cultures of the tubercle bacilli of bovine and human origin has been exclusively conducted by Theobold Smith. They differ in the appearance of the growth on culture media, the rapidity of the growth, and in their staining characteristics, but most of all they differ in their virulence. The virulence of the tubercle bacilli of bovine origin is much greater than that of the human baccillus. The differences would tend to throw some doubt on the transmissibility of the disease, had it not been demonstrated that the morphology of the tubercle bacilli underwent marked changes with the change in the cultures they would also probably occur if introduced into the bodies of animals of different species. It is probable that bacilli of bovine origin when introduced into the human body in the course of time undergoes metarmorphosis and presents a characteristic human bacillus. In four cases of generalized tuberculosis in infants Dr. Schwinitz found two cultures identical with bovine bacilli.

The evidence as to the communicability of bovine tuberculosis to infants is so conclusive that there is no longer any room for doubt. The only point in question is as to the comparative frequency of this mode of infection. This source of infection is much more frequent than has been generally supposed. Certainly, we have underestimated the frequency of abdominal tuberculosis in children. It is our duty to guard against tuberculous infection in every way possible and to insist on milk absolutely free from tubercle bacilli for infant feeding. The cows should be tested with tuberculin and those which react positively should be separated from the herd. The statement that only milk from cows suffering from tuberculosis of the udder is infectious, according to the investigations of Mohler, is correct. Twelve out of the forty-six cows examined by him which showed no sign of tuberculosis of the udder gave milk containing tubercle bacilli. It was to be hoped that the immunizing procedure of Behring, i. e., the prevention of tuberculosis in cattle by the inoculation of a protective virus which is now being extensively tried in Europe will prove a success, and we can remove the source of infection.

The Texas Medical Gazette, April, 1905.

Diseases of the Heart and Their Treatment—A Synopsis.—By Dr. Otto Lerch, New Orleans, La.

New Orleans Medical and Surgical Journal, May, 1905.

The Plasmodium Malaria Outside the Body of Man and Experiments with Deductions.—Dr. C. D. Simmons relates his experience with this disease during a stay of eleven years in the swamps of Ascension Parish.

A phenomenon of unusual interest was the fact that many of the young farmers who seemed to be immune to malaria under ordinary circumstances would invariably contract the disease soon after beginning work in the forest, where it was then customary to go to procure timber. Their mode of living in the forests was not out of the ordinary. They returned to their homes at night. It was a habit of daily occurrence for the timber men to remove their shirts and to work in this nude condition for hours at a time and exposing their bodies to the bites of myriads of mosquitos. The large and beautiful mosquito known as Anopheles punctipennis are very abundant throughout Ascension Parish. The author having satisfied himself clinically, at least, that man is often infected with malaria from mosquitos that had not previously fed upon his blood or any other human, he started a series of investigations to locate, if possible, the plasmodium outside the bodies of man and the mosquito. The intimate relations existing between the dragon fly and the mosquito led him to examine the blood of these insects under the microscope. Upon two occasions large circular bodies were found which had an active internal motion. He next turned his attention to the blood of birds, using fresh specimens. In quite a number of slides examined showed an organism identical with the plasmodium. Nearly all the malarial organisms found in bird's blood are of the flagallate variety. This is no doubt due to the high temperature of bird's blood. The rapid fall of temperature of bird's blood when placed on a slide causes the flagellar to become active in a few seconds. Upon one occasion while examining a fresh specimen of human blood he found a plasmodium of the flagallate variety in a perfectly clear fluid. The flagulla were plainly visible and of a gray color. The flagellate movements ceased in a few minutes and seemed to return to the body of the parasite.

It therefore occurred to the author that birds may be at least one of the hosts of the malarial parasite. The young birds before they are feathered, and the old ones during the moulting season, has many vulnerable points in their armour where the mosquito can use his hypodermic needle to his satisfaction. As many of our swamp birds are migratory and principally comes from Cen-

tral and South America during the spring and summer, it is possible that some of our graver forms of malarial troubles are brought here in this way. Many of these birds and the Anophele mosquito are found together in the same swamps. It is a well known fact that birds, malaria and the mosquito follow swiftly upon the heels of the woodman's ax.

Atlanta Journal-Record of Medicine, May, 1905.

Some Unusual Cases of Intestinal Diseases.—By Dr. Henry R. Slack, President of the Georgia Pasteur Institute.

Nashville Journal of Medicine and Surgery, May, 1905.

Septicaemia with Report of a Most Interesting Case.—By Dr. R. J. McFall, Cumberland City, Tennessee.

Southern Medicine and Surgery, May, 1905.

Functional Disorders of the Billiary Secretion and Their Treatment.—By Dr. Hubert Richardson, Baltimore, Maryland.

Book Notices.

Stimson on Fractures and Dislocations. A Treatise on Fractures and Dislocations. For Students and Practitioners. By Lewis A. Stimson, B.A., M.D., LL.D., Professor of Surgery in Cornell University Medical College, New York; Surgeon to the New York and Hudson Street Hospitals, etc. New (4th) edition, thoroughly revised. Octavo, 844 pages, 331 engravings and 46 full-page plates. Cloth, $5.00, net; leather, $6.00, net; half morocco, $6.50, net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1905.

Since the publication of the third edition many interesting details, some of much practical importance, have been added to the knowledge of certain forms of fracture, particularly in or near joints. The X-rays have been used so freely that a greater degree of confidence may be placed in the accuracy of diagnoses than was formerly possible. In fact, sufficient details have been obtained in some of the rarer forms of injury to permit systematic descriptions. Much new matter of great importance will also be found regarding the operative reduction of old dislocations.

The frequency and severity of the injuries treated in this volume, the necessity for prompt attention, and, finally, their medico-legal possibilities, all unite to render Dr. Stimson's authoritative work essential to general practitioners as well as surgeons. It covers every known form of these lesions, not a few of which were first described in its pages. The author's vast experience and sound judgment are reflected in a literary style of exceptional clearness, and his pages abound in telling engravings and plates. He has endeavored to adapt his work specifically to the needs of the practitioner, particularly in the sections on diagnosis and treatment. In this new and thoroughly revised edition the profession have at command the leading authority upon both subjects in their latest development.

Gray's Anatomy. Messrs. Lea Brothers & Co. have pleasure in announcing a new edition of Gray's Anatomy, to be published about midsummer, and embodying nearly two years of labor on the part of the editor, J. Chalmers DaCosta, M.D., of Philadelphia, and a corps of special assistants.

Commensurately with the importance of the largest selling medical work ever published, this new edition will present a revision so thorough and searching that the entire book has been reset in new type. In addition to the changes necessary to bring it abreast of the most modern knowledge of its subject, several important alterations have been made with the view of adapting it still more closely to present-day teaching methods, and in fact to anticipate the tread of anatomical work and study.

Thus, while the older nomenclature is used, the new names (B.N.A.) follow in brackets; the section on Embryology and History at the back of the present "Gray" has been distributed throughout the new edition in the shape of embryological, histological and biological references and paragraphs bearing directly on the part under consideration thus contributing to a better and easier understanding.

The illustrations have come in for their full share of the general revision, so that at this writing more than 400 new and elaborate engravings in black and colors have been prepared. Gray has always been noted for its richness of illustration, but the new edition far exceeds anything that has hitherto been attempted.

No medical text-book has ever approached "Gray" in study longevity and accumulating strength. Notwithstanding the many would-be competitors which during nearly fifty years have periodically appeared and endeavored to share its ever-increasing popularity, this wonderful creation of a genius who lived barely long enough to realize that his work was done—how well he never knew—goes on and on, each succeeding year bringing new friends and strengthening the fealty of the old.

The editor and publishers have spared

neither labor nor expense to keep "Gray" at the forefront of anatomical knowledge, and there seems to be no reason to doubt that its next fifty years will pass as smoothly and as successfully as have those past.

A Text-Book on the Practice of Gynecology. For Practitioners and Students. By W. Easterly Ashton, M.D., LL.D., Fellow of the American Gynecologic Society; Professor of Gynecology in the Medico-Chirurgical College of Philadelphia. Octavo volume of 1079 pages, containing 1046 new and entirely original line drawings. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $6.59 net; Half Morocco, $7.50 net.

Dr. Ashton's Practice of Gynecology is a new departure in medical text-book making, The author takes up each procedure step by step, the student being led from one step to another just as in studying any non-medical subject. Nothing is assumed, Dr. Ashton in every instance not only telling what should be done, but also precisely *how to do it*. All the methods and details of technic described have been thoroughly tested by the author himself, so as to assure their value and accuracy. A very commendable feature is the departure from the old routine method of devoting a general chapter to physical examination. In place of this the author presents the examination of each organ separately before describing its diseases, thus greatly aiding the student in familiarizing himself with the technic. A distinctly original feature consists in the line drawings made especially for this work under the author's personal supervision from actual apparatus, living models, dissections on the cadaver, and from the operative technics of other authors. There are ten hundred and forty-six of these illustrations, showing the procedures and operations without obscuring their purpose by unnecessary anatomic surroundings. Definite and precise instructions are given regarding the preservation of specimens of morbid tissues and secretions, and their delivery in good condition to the pathologist. The fore part of the work, dealing with antiseptic technic, shows great care in its preparation, Dr. Ashton wisely describing only those methods which he employs in his own practice, in order that the reader may have a clear and definite conception of the subject. Very special attention has been given to the consideration of visceral injuries, and we know of no other work on gynecology or general surgery discussing this important subject with the same amount of detail. This is decidedly a work for the general practitioner as well as for the student; and a good one.

Atlas and Text-Book of Topographic and Applied Anatomy. By Prof. Dr. O. Schultze, of Wurzburg. Edited, with additions, by George D. Stewart, M.D., Professor of Anatomy and Clinical Surgery, University and Bellevue Hospital Medical College, New York. Large quarto volume of 187 pages, containing 25 figures on 22 colored lithographic plates, and 87 text-cuts, 60 in colors. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $5.50 net.

In the preparation of this book Professor Schultze had in mind the need of a work that would combine the features of a text-book with the educational advantages of an atlas. He has produced a work of great merit, and not alone the anatomist but more particularly the general practitioner will find it of constant value. Professor Schultze has presented his own methods for the study of anatomy—methods proved to be correct and practical by many years of clinical study. Throughout the work the value of the knowledge of topographic anatomy in bedside diagnosis is emphasized. The many colored lithographic plates and the numerous text-cuts, sixty of which are in colors, are of exceptional excellence. Indeed, both for accurateness of detail and artistic beauty we have never seen their equal. The greater portion of the dissections from which these illustrations have been made are from the author's own preparations. Dr. George D. Stewart in editing the work has added many valuable notes.

Malaria, Influenza, and Dengue. By Dr. J. Mannaberg, of Vienna, and Dr. O. Leichtenstern, of Cologne. Entire volume edited, with additions, by Ronald Ross, F. R. C. S., F. R. S., Professor of Tropical Medicine, University of Liverpool; J. W. W. Stephens, M. D., D. P. H., Walter Myers Lecturer in Tropical Medicine, University of Liverpool; and Albert S. Grunbaum, F. R. C. P., Professor of Experimental Medicine, University of Liverpool. Octavo volume of 769 pages, fully illustrated, including eight full-page plates. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $5.00 net; Half Morocco, $6.00 net.

This new volume in Saunders' American Edition of Nothnagel's Practice represents the latest word on the subjects of which it treats. And more than that: It is the undisputed authority on these subjects. For this American edition Dr. Ross has made many additions to the article on Malaria, so

many discoveries having been made since the appearance of the original article. The articles on the Mosquito and its various relations to Malaria comes from the authoritative pen of Dr. J. W. W. Stephens, of Liverpool. The Influenza and Dengue sections are equally well written. The untiring labor of the editors in preparing this work for the English speaking market is evidenced on almost every page by the lengthy and valuable editorial interpolations. This is the tenth volume in the series, and the eleventh one (tnat dealing with Diseases of the Kidneys and Spleen and with Hemorrhagic Diseases) is promised very soon. When the series is completed it will undoubtedly form the best practice of medicine in existence.

Saunders' Pocket Medical Formulary. By William M. Powell, M. D., author of "Essentials of Diseases of Children;" Member of Philadelphia Pathological Society. Containing 1831 formulas from the best known authorities. With an Appendix containing Posological Table, Formulas and Doses for Hypodermic Medication, Poisons and their Antidotes, Diameters of the Female Pelvis and Fetal Head, Obstetrical Table, Diet-list, Materials and Drugs used in Antiseptic Surgery, Treatment of Asphyxia from Drowning, Surgical Remembrancer, Tables of Incompatibles, Eruptive Fevers, etc., etc. Seventh Edition, Revised. In flexible morocco, with side index, wallet, and flap. $1.75 net. Philadelphia and London: W. B. Saunders & Company, 1905.

When a work has reached its seventh edition there can be no doubt of its practical usefulness. And it is not at all surprising to us that Saunders' Pocket Medical Formulary should have attained such popularity, for we know of no similar work containing so much useful, practical, and accurate information in so small a compass. In this new seventh edition there have been added over 460 new and valuable formulas, selected from the works and private practices of the best authorities. The editor has shown rare discretion in the elimination of many obsolete formulas, inserting in their place newer and better ones, embodying a large number of approved new remedies. In its new edition this Formulary is thoroughly representative of the most recent therapeutic methods, and its convenient size and mechanical get-up make it the most desirable work of its kind on the market.

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Literary Notices.

The Living Age for June 17 contains two articles of especial interest to American readers—Lucas Malet's sprightly and pungent contribution to The Fortnightly on "The Threatened Re-subjection of Woman," apropos of President Roosevelt's recent utterances, and Daniel Crilly's appreciation of "American After-dinner Oratory," from The Nineteenth Century and After.

The controversy between Dr. Reich and Canon Cheyne over the "Higher Criticism" goes merrily on in the pages of The Contemporary Review. The Doctor's rejoinder to the Canon's "remonstrance" was reprinted in The Living Age for May 20, and the Canon's reply—"Has the Clock Stopped in Biblical Criticism?"—will be found in the number for June 3.

No mere catalogue of his achievements can indicate the place Mr. Bonaparte holds in Maryland politics or the influence he exerts. Thirty years' straight thinking and right living in political affairs have bred an unfailing confidence in him so far as the primary political virtues are concerned He has become an inspiration to young men with inclinations toward decent civic conduct. They never have any doubt as to where he will stand on any question of public morality. They know he cannot be misled by sophistries or seduced by the most subtle of bribes. In Bonaparte's long fight for reform in Maryland he has marched side by side with many volunteers. Some have had their ardor cooled by the warnings and appeals of friends, some by pressure brought to bear upon their pocketbooks. Others have capitulated to the enemy upon the gift of an office. One of the most brilliant reached a point where he had to choose between the cause of reform and the corporation. But no one has ever doubted Bonaparte. No one has ever looked to find him in the future different from what he has been in the past. Whether as a reformer ferreting out graft, as a lawyer maintaining high ethical standards among the members of his profession, as a philanthropist lending his aid to charitable endeavor, or as a publicist sounding the alarm in some question of grave concern, he has always maintained high ideals, without cant and without despair. Such a spirit will he carry with him into the Navy Department.—From "A Bonaparte at the Head of the American Navy," in the American Monthly Review of Reviews for July.

The novelette in Lippincott's for July is a strikingly lively and lovely summer story called "An Orchard Princess." Its author, Ralph Henry Barbour, is well remembered

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through his "Kitty of the Roses" and other good work. As a creator of feminine character Mr. Barbour seems to be particularly felicitous and his heroine in "An Orchard Princess" more than justifies this opinion. She is discovered by Miles Fallon and his white bulldog, "with a tail scant two inches long," when off on a country walk, and the romance thus begun leads through lanes straight and crooked up to a satisfying end —thanks to the dog.

Seumas MacManus contributes a keenly humorous Irish folk-tale called "The Wonderful Story of Terry McGowan." This title seems to fit the fantastic happenings which follow the loan of a "strapper beast" in the hope of a two-fold reward. A bright summer story of Buzzard's Bay, by Elizabeth Duer, is "The Trowsers of Tragedy." It closes with an elopement under really novel conditions. "The Dragon's Discipline," by Arthur Stanley Riggs, is an extremely impressive tale of Japanese loyalty and courage on board a torpedo boat. A delicious bit of realism in the family circle by Elizabeth Robins Pennell is called "Enrietter." It is a personal experience in England. A pathetic incident of boarding-house life in New York is told by Juliet Wilbor Tompkins under the title of "A Lady from California." "The Heart's Charity" is a sweet and clever love-story written by Ina Brevoort Roberts, the author of "The Lifting of a Finger."

There are many practical and valuable hints for amateur gardners in Eben E. Rexford's paper on "The Garden in Summer." These suggestions are pointed at a period in midsummer when the average gardner thinks there is not much to be done.

The verse, attuned to the idyllic days, is "Newport Marshes," by Clara Sherwood Stevens; "The Burden of Desire," by Madison Cawein; "Night," by Winfred Chandler; "Along the Way." by Richard Kirk; "Reproof," by Isabella Howe Fiske; "Too Late," by Daniel Kelley; "Vision," by Alice Luise Wilson, and "The Iconoclast," by Alonzo Rice.

Ehe "Walnuts and Wine" department is full to overflowing of fresh jokes and funny stories warranted to wake up the reader even in the drowsiest weather.

Abstracts of the Leading Articles of the Month.

Chloride of Ethyl as a General Anaesthetic.

Daniell, in the Intercolonial Medical Journal of Australasia, says that in the first stage some patients do not breathe at first in a natural way, due frequently to nervousness, or to some mistaken idea as to how they should breathe. If given correctly, the sensations are not very much unlike those of nitrous oxide—a feeling of tingling through the body, and singing in the ears. Most patients told the writer that they had

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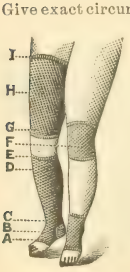

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The Serum Therapy of Tubercle.

Marmorek (Medical Press) says that tuberculin was not itself the toxin of tubercle, but that it was a bacterial product which served to excite tubercle bacilli to the production of a toxin. This being so, one could not expect any satisfactory result from treatment by antitubercular serum. By the growth, however, of tubercle bacilli in a special medium, "leucotoxic serum," the preparation of which is very complicated, he has been able to produce a toxin which causes definite lesions in horses and other animals. To this toxin an antitoxin is produced in the blood of horses. It will be remembered that when he published his investigations a year ago, they met with hostile criticism from many French observers. The later reports, however, both in England and Germany, have been more favorable. Latham, Richer, and Fry all think well of the action of the serum, and advise further trial. More recently Friedman has separated a culture of tubercle bacilli from the lung of a turtle, and this culture is so innocuous to higher animals as to be available as a vaccine. In addition, it causes so high a degree of immunity in the ox that the serum of the latter may be used as an antiserum. No trials have yet been made in the human subject, but the prospects are most promising.

no unpleasant sensations, and as a rule the loss of consciousness is so sudden that they have no time to define their feelings.

The second stage begins with loss of consciousness; excitement, either mental or muscular, is as a rule absent. The respirations become quicker and deeper; the color improves; the pupil begins to dilate, but is active to light; the conjunctival and corneal reflexes are both present. The eyelids sometimes show slight twitchings, and the eyeballs rotate, and may present the condition of vertical nystagmus. Swallowing movements are not infrequent, and there is slightly increased secretion of saliva and mucus.

The third stage is that in which the patient is deeply enough under to permit of the surgical procedure. It is not always easy, at first, to know when the patient has reached this stage, and a little experience in various types of subjects is necessary to insure satisfactory anesthesia. It should also be remembered that, as in ether and chloroform, there are various depths of anesthesia, and it is by no means necessary to push the drug in some operations, although it may be so in others. Speaking generally, a patient may be considered to be under by the following symptoms:

The respirations become regular and automatic, and usually they are quicker and deeper than normal. All hesitating breathing has vanished. There may be stertor of varying degrees, from softly snoring, like deep chloroform narcosis, to a louder, as in some patients under ether. The full-blooded and plethoric subject and the obese are especially liable to noisy breathing; also those having enlarged tonsils, or any throat trouble, causing a narrowing of the upper air-passages; also heavy smokers with irritable and congested throats.

The eyeballs, which were during the second stage described as rotating, now become fixed in one position or another. They frequently turn downward or inward, and in some cases convergent squint is observed. It is not a bad plan to direct the patient to follow your finger with his eyes, without of course moving his head, your finger being slowly moved from side to side, about nine inches from the face. When the eyeballs become fixed, the eyelids generally close a moment after. It is as well to let him have a few more respirations after this before removing the mask.

Muscular relaxation is not altogether to be relied on, bnt it is a confirmatory sign. The arm will drop to the side if lifted up. If held out by the voluntary effort of the patient, it will be seen to gradually fall. Muscular rigidity may persist; this is generally found in strong, muscular men, alcoholics, heavy smokers, and generally those who take all anesthetics badly. But in the majority of cases, if the anesthetic is sufficiently pushed, muscular relaxation will follow.

The conjunctival reflex is the first to vanish, and is of some little use as a guide; the corneal reflex persists for a longer period, and in short cases may be permitted, especially in operations on parts not very sensitive. On the other hand, in operations on sensitive parts, it is as well to abolish this reflex; but it should be remembered that it will persist in some cases although the patient is deeply under, and any attempt to abolish it would be putting the patient in danger of respiratory and consequent circulatory depression, due to an overdose.

Dilatation of the pupil, like the former, is not an infallible guide, but in the greater number of cases a dilated pupil attends this stage, especially in the early course of surgical anesthesia. In more prolonged administration the pupil comes down very much in size, even to normal. The pupil is very sensitive to peripheral stimuli, and is far larger in the anesthesia under consideration than any other, and to one used to the administration of chloroform alone it may be a little disconcerting.

The recovery, in the majority of cases, is without any unpleasant symptoms, and the patient is able to walk home and attend to his business.

Lichen Pilaris, seu Spinulosus.

Adamson (The British Journal of Dermatology) says that under this name there is well known in England an affection of the skin occurring in children, and usually in boys, which is characterized by the appearance of fine filiform spines arranged in groups, more or less symmetrically, distributed over the trunk and limbs. The filiform spines arise from pilo-sebaceous follicles, the mouths of which follicles are slightly raised to form pin-head-sized papules, either of the normal color of the skin or slightly red. They are unaccompanied by itching or other subjective sensations, and there is little or no disturbance of the general health. Similar cases have been observed in France, although there the affection is not so well known and it is apparently not recognized as a distinct entity. The cases recorded in France have been described under different names. The acne cornee of Hardy and of Leloir and Vidal, and possibly also of Guibout, is the same disorder, but the cases of acne cornee observed by Hallopeau, with the exception of one case, viz., acne cornee en aires, do not quite correspond to cases of lichen spinulosus seen in England. Other cases have been published by Barbe as examples of keratose

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folliculaire (*Type de Brooke*) and just recently a case by Audry under the title keratose pilaire enguinante. In addition to the typical cases of lichen spinuloses in children, where the spiny lesions constitute the whole eruption, there are other cases in which such lesions are associated with an eruption of lichen planus. Although this association may occur rarely in children, it is more common in adults. In adults, indeed, the occurrence of the spiny lesions seems to be usually, if not invariably, associated with lichen planus. This fact would seem at first to suggest some etiological connection between the two affections, lichen spinulosus and lichen planus; but further consideration shows that the purely spinous cases of children are without the subjective sensation of itching, while those cases associated with lichen planus do usually present this symptom. Moreover, the spiny lesions in these latter cases are usually associated with the acuminate follicular lesions of lichen planus, and it is most probable that they have, therefore, merely an accidental association with a perifollicular disturbance. Such an hypothesis is made more probable by the fact that similar spines are occasionally associated with the follicular lesions of lichen scrofulosorum and miliary syphilide, and also with those of pityriasis rubra pilaris. Histologically, the lesions of lichen spinulosus in children show that the pathological process is essentially a hyperkeratosis of follicle; perifollicular inflammation is absent, or at any rate very little marked.

A Simple Method of Operating on Piles.

Mitchell's (British Medical Journal) method of operation on hemorrhoids is as follows: The sphincter having been dilated and the piles brought fully into view, the mucus membrane is sponged with a solution of corrosive sublimatte, 1 in 1,000. A pile is then clamped in a long, narrow-bladed artery forceps, and the redundant mucus membrane and pile are cut away by scissors. A curved needle threaded with catgut hardened in formalin is then inserted immediately above the clamp and the end of the catgut secured by a knot. A continuous suture is next rapidly applied around the clamp, the clamp is withdrawn (this can be done without the slightest difficulty), and the suture tightened, a vertical line of sutures within the rectum. Each pile should be similarly treated in turn.

KINSTON, N. C., June 22, 1905.

DEAR DOCTOR:—The Associafion Railway Surgeons, A. and N. C. Co., will meet Tuesday and Wednesday, July 18th and 19th, at Atlantic Hotel, Morehead City. The session will be opened at 8:00 p. m.

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The Clinical Forms of Gastric Carcinoma.

Bard (British Medical Journal) mentions the importance of grouping cancers of the stomach according to their clinical symptoms rather than to their mere pathological appearances. The writer divides them first into two groups, pyloric and extrapyloric. In the former troubles of motility and of passage predominate; in the latter glandular perversions and digestive troubles; hence we have two great clinical syndromes. Each group he again subdivides into forms typiques, frustes, and larvees. The pyloric forms, when typical, produce dilatation of the stomach; they are easy to diagnose from other cancers, difficult from other forms of stenosis. There are three varities: (1) Annular stenotic cancer; (2) juxtapyloric cancer with secondary stenosis; (3) prepyloric ulcerative cancer. In Nos. 1 and 3 cachexia is often absent. The distinction between juxtapyloric cancer on the side of the small intestine and primary stenotic cancer is important. The former is separated by two signs. The later supervention of the syndrome of stenosis and characteristic vomiting, which in place of appearing first, as in the primary form, is preceded by a phase of simple dyspepsia, emaciation, and loss of strength; and secondly, the production of hypertrophy of the stomach without notable dilatation and descent of the colon. Stenosis following late in a patient already anorexic on an organ already invaded and fixed by adhesions cannot exercise on it an effect as powerful as on a healthy organ keeping its digestive power and subject to copious ingesta. Pyloric ulcerative cancer has a slower progress, is more subject to recurrences, and it causes more severe pain and more frequent hemorrhages than the other two forms. The stenosis is more spasmodic than organic and the cachexia is little marked. This variety is the result of cancer developing upon an ulcer. The form fruste is the colloid cancer. This produces pyloric insufficiency, not stenosis; there is no dilatation, habitual diarrhea replaces the vomiting of typical forms, and cachexia is marked. The form larvee is represented by the cylindroidal submucous variety; its cancerous nature is still contestable. It stimulates esophageal trouble, vomiting comes on rapidly after food, and there is considerable diminution in the size of the stomach.

Extrapyloric forms: The typical ones answer to the ordinary classical description of stomach cancer. The formes frustes are two: (1) a painful dyspeptic form simulating ulcer or gastritis; and (2) a cachectic phenomena. The formes larvees simulate pernicious enemia, cancer of the esophagus or liver, tuberculous peritonitis, etc. He thinks operative measures are most satisfactory in annular pyloric cancer, ulcerative forms, and the dyspeptic type of extrapyloric cancer.

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Lumbar Puncture and Fractures of the Cranium.

Pinchart (British Medical Journal) when considering the importance of lumbar puncture in the diagnosis of head injury, points out that the presence of blood in the cerebrospinal fluid cannot be regarded as a constant and reliable indication of fracture of the cranium. The fluid may be free from blood in certain cases of fracture, and show signs of its presence in cases of cerebral hemorrhage of an exclusively medical kind. The differential diagnosis between fracture and apoplexy may become difficult in cases in which the attack of cerebral hemorrhage has caused a fall on the head. He reports three cases of cranial fracture, in each of which blood-stained fluid was withdrawn on lumbar puncture. In discussing the value of this sign in regard to prognosis and the indications for operative treatment, he states that its absence in a clear case of cranial fracture with symptoms of compression should from its pointing to extradural hemorrhage lead the surgeon to trephine without delay. If, on the other hand, the fluid removed by puncture be blood-stained, then he holds it would be as well as a rule to refrain from operative intervention, as the presence of blood would indicate diffused intradural hemorrhage and more or less laceration of the brain. In such cases lumbar puncture may prove of therapeutic as well as diagnostic value by relieving the cerebral compression. Reference is made to a case recorded by Poirier in which grave symptoms following an injury to the head were effectually relieved after the removal by lumbar puncture of 40 cubic centimeters of cerebrospinal fluid.

The Cytodiagnosis of Pleural and Cerebrospinal Fluids.

Turton (The London Practitioner) calls attention to the valuable aid in diagnosis that is rendered by a careful study of the cells present in various pathological effusions. He says (1) the methods of performing cytological examinations; (2) the varieties of cells found in pathological effusions; and (3) the cytology of pleural effusions. As a result of a close study of the various cells found in the different pathological fluids, the author draws the following conclusions: (1) In pleural effusions the cytological formulæ stated by Widal and Ravant hold good in the great majority of cases. An excess of lymphocytes indicates generally a tuberculous origin; a preponderance of polymorphonuclear cells an inflammatory process due, for instance, to a pneumococcal or streptococcal infection. A passive or mechanical transudation contains, as a rule, a large number of endothelial cells. It must be borne in mind, however, that especially in the earlier stages of tuberculous effusions, departures from the rule frequently occur. (2) The cerebrospinal fluid in meningitis of tuberculous origin usually shows lymphocytosis, whilst in inflammatory states caused by the meningococcus of Weichselbaum, the pneumococcus or streptococcus, and in posterior basic-meningitis it is characterized by an excess of polymorphonuclear cells. Many discordant results, however, due it may be in some cases to a secondary infection, have been recorded. Cytological examinations may thus help us not only in differentiating the various kinds of meningitis, but also in distinguishing meningitis from such conditions as the cerebral irritation of typhoid fever and other infectious diseases, from tetanus, and hysterical pseudomeningitis, in which there is no increase of cells in the cerebrospinal fluid. (3) The presence of lymphocytosis is almost constant in general paralysis of the insane, in tabes dorsalis, in syphilitic diseases generally of the central nervous system, and may be useful for diagnostic purposes in distinguishing these diseases from other affection more or less resembling them. General paralysis and tabes promise to be diagnosed even in early stages by the use of cytological examinations, as shown by Maillard. The importance of early antisyphilitic treatment in these diseases is generally acknowledged, and cytology would seem to afford the means of making an early diagnosis. He says that in no case should a diagnosis be based wholly on the result of the cytological examination, but this should form merely a valuable link in the chain of clinical evidence. As in ordinary blood examination, he emphasizes the great importance of making more than one cytological count of the pleural or cerebrospinal fluid whenever this is possible.

Some Chinese Medicines.

Synge (Dublin Jour. of Med. Sc.) says that many absurd beliefs recorded in the Chinese Materia Medica are set forth. Sulphate of iron is said to go at once to the liver and gall bladder and is good when the liver is inflamed; it is also good for cough, epilepsy, hematuria, etc.; it is said to be obtained from copper pits and to be the fluid part of the copper, thus enabling it to go to the liver. The color of the best preparation should resemble the inside of the mouth of a green frog. The human placenta is said to cure weakness, thinness, wasting diseases, madness and epilepsy; it should be taken from a healthy primapara, washed in a running brook, then boiled, after which it may be toasted or powdered, or eaten after the boiling with rice. Powdered tiger bones are thought to give

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strength. The urine obtained from the white horse, the ass and children is given in fevers. Another absurdity recorded is that when a placenta does not come away it goes up into the woman's chest and suffocates her. It is also believed that the milk comes into a mother's breast with the incoming of the tide.

Surgical Shock and Collapse.

Lockhart, in the London Medical Lancet, says that surgical shock is a condition produced by exhaustion of the vasomotor centers and the resulting great fall in blood-pressure. Collapse is a similar condition caused by lowering of the blood-pressure from hemorrhage or paralysis of the vasomotor centers. In surgical operations shock most frequently results from operations upon the abdomen, the most important factors in its causation being injury to or exposure of the peritoneum, the length of the operation, injury to organs richly supplied with nerve fibers, as the stomach, uterus, and kidneys, evisceration, and extensive and prolonged manipulations. In operation upon parts other than the abdomen the most important factors in causing shock are injury to large or important nerve trunks or injury to parts richly supplied with nerve endings, the area of the wound, the time of exposure of the tissues, and hemorrhage.

Another important factor in the causation of shock during surgical operations is the anesthetic. Ether and the C. E. mixture are the best anesthetics for cases where there is danger of shock, chloroform, on account of the fall in blood-pressure which follows its administration, being very unsuitable for such cases. The time occupied in performing the operation is always an important factor, more especially in old people and children. The condition of the patient prior to operation is important, especially as regards the condition of his nerve centers. In the treatment of shock stimulants, and especially strychnine, are absolutely contraindicated, as they tend to increase the severity of the condition and to retard recovery. Shock can be produced in an animal by the administration of strychnine alone, and it is as reasonable to treat shock by injections of strychnine as it would be to attempt to cure a dying horse by kicking it. The position with the head down and the foot of the bed raised is of considerable value in the treatment of shock, and should be more extensively used.

Compression of the abdomen either manually in an emergency or by the application of a tight abdominal binder is a most effectual method of treating shock in all cases. The establishment of an artificial peripheral resistance by the application of external pneumatic pressure affords an absolutely certain method of maintaining the blood-pressure, and though not at present a practical method should some day prove of great value. The intravenous infusion of salt solution or physiological serum will raise the blood-pressure in all degrees of shock. As a method of treatment in shock it is disappointing, as its action is fleeting and it cannot be continued indefinitely. In the collapse of severe hemorrhage it is effectual and lasting in its effects. The introduction of saline solution into the abdomen at the end of an abdominal operation is a valuable method of combating shock, and is not contraindicated by the presence of pus in the abdominal cavity.

One of the most effectual methods of treating shock that we possess is by the administration of drugs such as adrenalin and ergot, which raise the blood-pressure by increasing the peripheral resistance independently of the nerve centers. The treatment of shock by the administration of these drugs is as yet in its infancy, and only a small number of cases have so far been treated in this way. The experimental evidence is, however, very complete, and the few clinical cases where these drugs have been used are very encouraging. The use of these drugs instead of the stimulants which are now so popular, but which have been shown to be useless, will probably result in many lives being saved.

The Calculation of the Date of Delivery in Pregnancy.

W. J. Caie (British Medical Journal) gives the result of his records in 200 cases under his observation, only those being recorded in which, on enquiry, the woman gave an exact date for the onset of the last menstrual epoch, and the results are as follows:

A. Labor occurred before the estimated date in 53.40 per cent.

B. Labor occurred after the estimated date in 24.50 per cent.

C. The estimated date was correct in 16.04 per cent.

The remaining percentage is accounted for by immature and premature labors.

In A. labor occurred on an average of 3.4 days before the estimated date.

In B. labor occurred on an average 1.8 days after the estimated date.

There are therefore two points about this analysis which should be noted:

1. The percentage of labors occurring before the estimated date is far in excess of those occurring after it.

2. In Class A. the average number of days is greater than in Class B., or, in other words, those in which the date of delivery is after the estimated date are nearer the latter than those in Class A.

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The writer says from these facts that, in Naegeli's method, the number of days added on is too great and that by adding a fewer number of days a still nearer approximation to the date of delivery might be got and this conclusion comes into line with the average length of gestation arrived at from the authorities quoted, which is less than that given by Naegeli. If two days less be added the result corresponds both to the average length of pregnancy which he quoted and with the average in his Class A. Where available—which, unfortunately is seldom, Lowenhardt's method will be found to be more accurate than Naegeli's, and the two will be found to correspond almost exactly, provided fewer days are added to the latter.

In fifty other cases which he calculated by Lowenhardt's method, the date of delivery was in all within 1.6 days of the estated date. Lowenhardt's method consists in counting the number of days between the last menstrual period and the one preceding that and multiplying by ten the date can then be got by tables.

Laryngeal Tuberculosis; Its Treatment.

Barwell (Edinburgh Med. Jour.) mentions the fact that laryngeal tuberculosis is a very common disease. It has been estimated that 50 per cent of cases dying of phthisis show it at post-mortem, and that one half of these cases could be recognized clinically. The general treatment should be that instituted for the disease in other parts of the body. Only a soft whisper should be used in speaking, so that the larynx may be rested. As a palliative a laryngeal spray of a few minims of five-per-cent cocaine solution or an insufflation of morphine 1-16 of a grain, with 2 grains of starch or 3 to 5 grains of orthoform, should be given half an hour before meals. The cough and catarrhal condition of the upper air-passages should receive appropriate treatment. The remedial treatment is best applied in the form of pigments, of which lactic acid is the best and may be used in 40- to 50-per-cent solution, gradually increased to 75-per-cent. The lesions themselves are curetted when there is much infiltration and deep or extensive ulceration. In some cases more extensive operations, as tracheotomy, thyrotomy, or partial laryngectomy, must be resorted to. His latest reports show that 44 cures have been obtained out of 211 cases. Tuberculous laryngitis complicated by syphilis of the larynx or by pregnancy does badly.

Psychosis in Pregnancy; Induced Abortion.

Trent (British Gynecological Journal) reports that a quartipara of thirty-one, influenced by reading "Notre Dame de Paris," had from the beginning of her pregnancy the fixed idea that the child would be a monster. She refused food, so as not to feed it, and could not sleep because she could hear it cry "like some one being choked." She attempted suicide by throwing herself under a train, After some days' observation in a hospital the induction of abortion was decided upon. A laminaria tent was introduced, and she immediately appeared to be better, slept pretty well that night, though she dreamed that the monster had cried out because a pin had been stuck in its head. Two days afterward the uterus was emptied under anesthesia. She slept well, took her food, and was soon absolutely normal, and in a fortnight was discharged cured. Alienists do not as a rule expect much benefit from induced abortion in the psychoses of pregnancy.

Puerperal Septicemia, with Special Reference to the Value of Antistreptococcic Serum.

Raw (Liverpool Medico-Chirurgical Journal) dwells on the value of antistreptococcic serum in this condition. Twenty-seven of his 61 cases showed the streptococcus pyogenese, and it is only when this organism is present that the serum is of value. Its therapeutic effect is marvelous, the temperature falls, the patient perspires and often goes to sleep, while the pulse-rate is much decreased. The writer offers the following conclusions as the result of seven years' observations:

Streptococci must be demonstrated by the microscope, and confirmed, if possible, by cultures, before the serum is used.

The serum must be used in an early stage of the disease if its full benefit is attained.

The doses should be large and repeated often.

Two Cases of Excision of Gasserian Ganglion for Neuralgia--Operations 1896 --No Recurrence.

Harrisson (Liverpool Medico-Chirurgical Journal) mentions two cases which are of special interest because of the long post-operative immunity from pain.

The first case was that of a laborer, forty-five years of age, who had suffered from right-sided neuralgia in the distribution of the fifth nerve for five years. After two operations upon the course of the nerve, which failed to afford permanent relief, the Gasserian ganglion was removed. The second case, forty years old, had been suffering three years. The primary operation was excision of the Gasserian ganglion.

In neither case has there been any recurrence, although it is eight years since operation. He prefers the temporal to the pterygoid route.

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Miscellaneous.

The Chicago Octopus: (The Journal American Medical Association) Its Editor, Its Aims and Its Methods.--New Converts Shout Loudest.

YE EDITOR.—The present editor of the great (so called) organ of The American Medical Association, I have always understood, is a reformed homœpath, who practiced on an exclusive (and absurd) dogma twenty years. If this be true, it will account for much in the policy and course of the publication, which, unfortunately for the mass of the profession, he directs, on the principle that new converts shout loudest. In no other way can his newly awakened fanaticism on medical ethics be accounted for. "Their sectarian title makes them quacks," says the old code, which code has been abandoned for the milder "principles of ethics" since his accession to the mantle of Father Davis and the great John B. Hamilton, (which, by the bye, it is much too large for him and swallows him as a peck measure would a pea.) His zeal in the cause of 'ethics' which he has so recently espoused, leads him to extremes. He would out-Herod Herod. He has instigated and brought about the creation of a commission or committee of censors who promulgate the order that proprietary medicines are unethical, and unless the proprietors will surrender for publication the secrets of their business, make common property of the formulæ for making their products, so that every substitutor can make and sell 'something just as good," they are to be tabooed, and denied space in the pure and undefiled pages of the great 'ethical' organ, ye Octopus! Great Cæsar! The sword of Democles was not half so terrible. Pity, isn't it?

This ridiculous and impossible policy, I am sure, does not represent the wishes and views of the medical profession of America—of which eighty-five per cent. are not members of The American Medical Association, and, unless a broader and more representative and popular man be put in the editorial chair and becomes the director of the business affairs of the association, never will be. It does not represent the wishes of the fifteen per cent. who have been coaxed, bull-dozed or otherwise induced to join the association. I'll give an instance in support of this assertion :

The American Congress on Tuberculosis was the first organized body to fight tuberculosis. It was organized in 1900, and held its fourth annual session in St. Louis in October, 1904, under the auspices and upon invitation of the World's Fair management, and the patronage and authority of the Federal government. Secretary of State Hay invited delegates to be sent from all foreign countries. The meeting was successful, largely attended, and gave the first impetus to the movement now so general, enlisting influences that will be effectiva in limiting the spread of consumption. It was participated in by many of the most distinguished physicians from Canada and Nova Scotia, Mexico, Central America, South America, Cuba and Porto Rico, and of the South and West, Illinois, the home of the Octopus, being largely represented, prominent members of the A. M. A. and readers of the great Octopus. Dr. Simmons, ye editor, devoted one inch of the valuable space at his disposal to a sneer at the "so-called Congress on Tuberculosis."

Common decency, or, at least, a decent regard for his readers, many of whom are members of the Congress, working earnestly in the cause of humanity and the public health, demanded the support and approval of the great so-called "representative organ" of the great A. M. A., and the neglect of it was so clearly the result of personal bias and prejudice towards the organizers of the Congress, (the Medico-Legal Society,) on the part of ye narrow editor* as to excite disgust.

Thus has the Journal of The American Medical Association aroused antagonism in the ranks of the profession, when a broader and more liberal and sensible course would have cemented the friendship of the members and built up the association. Not only has antagonism in the ranks been aroused, but a large element of the medical press is arrayed in hostility against it, and the prescription of the high class pharmacal products, along with the nostrums in the newspapers, no discrimination except on impossible and outrageous terms, has aroused the animosity of the powerful proprietary interest, driven them to organize for defense and set in motion influences which may lead to the withdrawal of patronage altogether from that organ and perhaps all medical journals.

* * * * * *

YE AIMS.—The Medical Association of Texas, under the old organization, crumbled constantly. It was building up and falling down, so that from 1884 to 1903 inclusive, it gained only 100 members and represented only six per cent. of the profession of the State. We joyfully hailed a plan of reorganization that seemed to remedy this and secure cohesion, hence we all worked for it with a vim, cooperating with the paid organizer (paid by ye Octopus,) without a suspicion of the ulterior and nefarious object aimed at by that great Devil-fish, which, in the light of recent developments is revealed. Why should the A. M. A. pay to have the State Associations organized? It was an investment. Every member whipped in, is $5 for the Octopus. See! The Octopus has corralled the State associations, and through its tentacles, (State Association Journals) is, like its prototype, making them feeders to its rapacious jaws. Its object is to crush out all individually owned medical journals that have the courage to criticise it; and, co-operating with the patent medicine interests, with which (The American Medical Journalist says) it has made a "combine" and an agreement for co-operation, to suppress such proprietary medicines as will not make common property of their formulæ. The American Medical Journalist adduces evidence of such an agreement. (See March and April numbers of that publication). If there is a shadow of truth in this charge, it is enough to excite derisive laughter and provoke indignation and utter contempt for a publication which, while posing as the representative organ of the medical profession of America, and champion of medical ethics, stands in with the promoters and exploiters of the worst nostrums on the market, the newspaper catarrh and syphilis and lost-manhood specifics. The Reporter, the journal of The North America Retail Druggists Association (so the American Medical Journalist says), gleefully points out that the less of proprietary medicines prescribed by doctors the more patent medicines they will sell, and the profit is better. They have a systematic rake off from these patent medicines, and they urga all druggists to "Push Miles," "Push Peruna," "Push Swamproot," etc. They, (the J. N. A. R. D. Assn.) smack their lips in anticipation of the success of the Octopus in forcing doctors to quit prescribing the legitimate proprietary articles, and says that then the doctors will write more prescriptions, on which there is a larger rake off.

In brief, I conceive the aims of the Octopus to be, in addition to the scheme above pointed out, the establishment of a great medical journal trust, and already, many of the State associations have fallen into the trap and are applying the screws. Well, you will see that they will have their eyes opened perhaps when it is too late; and what a falling off my countrymen, there will be! When the rich and grasping Octopus shall have accomplished its ne-

* Independent Medical Journals please copy.

Resinol in Pruritus

RESINOL is the specific for all forms of pruritus. There is nothing that produces such immediate cessation from its pain, burning, and intolerable itching.

RESINOL SOAP

possesses the healing qualities of the Ointment, and is invaluable for cleansing affected parts.

I find by testing it that your Resinol Ointment is a most excellent preparation for all skin diseases; and for pruritus ani et vulvæ, I have never found anything better.—I. B. HARGETT, M. D., Cleveland, O.

I used your Resinol Ointment a short time ago in a most intractable case of pruritus ani which defied every other remedy used. It was relieved in a very few applications. I regard your preparation as a triumph over this detestable symptom.—J. G. KELLY, M. D, Hornellsville, New York.

I tried your Resinol Ointment on myself. I had suffered from pruritus ani, or marginal eczema, for 25 years, and had tried many remedies without any relief, until Resinol proved soothing and stopped the itching instantly.—J. T. HICKMAN, M. D., Mt. Jackson, Virginia.

Resinol Ointment is the first local application I have found, that has given lasting and gratifying results in the treatment of pruritus vulvæ.—DR. GRACE WINTERSTEEN, Harrisburg Pennsylvania.

SAMPLES SENT ON APPLICATION.

RESINOL CHEMICAL COMPANY,

GREAT BRITAIN BRANCH
97 NEW OXFORD STREET, LONDON, W. C.

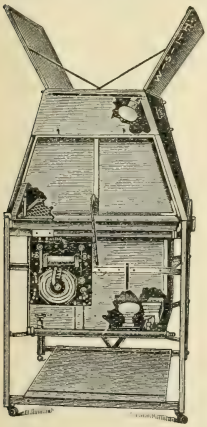
BALTIMORE, MD.

AUSTRALASIAN AGENTS,
CHAS. MARKELL & CO., SYDNEY, N. S. W.

The Portable Sanatorium

A GREAT NEW INVENTION

A Whole Sanatorium in a 4 Foot Space



10 Appliances in One
Operating Table
Massage Table
Hot Air Body Bath
Vapor Bath
Electric Light Bath
Sun Light Bath
Violet Ray Outfit
Sterilizer
Baby Incubator
Arm and Leg Bath

and a lot of other combinations. Ask for our pamphlet describing the Portable Sanatorium and Catalog of Wall Plates, Massage Machines, Batteries, Electrodes, and Surgical Instruments.

Western Surgical Instrument House

Salesroom: 52 Dearborn St.
Factory: 59th and Wallace Sts.
Chicago, Illinois

LABORDINE

Vegetable Antipyretic

Reduces Temperature

without heart depression.

Relieves Pain

without bad after-effects.

Try Labordine in a critical case where other antipyretics have failed to give the desired results.

Dose—5 to 10 Grains.

Prepared in Powder and 5-grain Tablets.

Samples to Physicians on request

LABORDINE PHARMACAL CO.
ST. LOUIS, MO.

farious purpose, and has the State Associations "grabbed," ye scheming editor can say, as did he of Khorassan: "Ye would be dupes and ye are."

* * * * * *

The better class of proprietary medicines are well known to the physicians who read. and they are no more 'nostrums' than my horse. 'Noster' means 'ours.' My horse is 'ours'—the medicines are not. The principal and active ingredients are well known, and the dose. It is not necessary that the prescriber should know the adjuvants and non-active ingredients, any more than he should bear in mind the exact composition and amounts of each ingredient, say of the C.C. Pills of the Dispensatory, and I'll bet an apple ye editor of ye Octopus, nor his 'council' cannot tell you, off-hand, what they are made of. Why should a proprietary medicine, often a household necessity, be any more 'unethical' than any other trade marked article, say, Sapolio, or Uneeda Biscuit, or Royal Baking Powders? Or than surgical instruments, all of which are protected. Bosh.

* * * * * *

Whipping the Devil Around the Stump.—It is a case of do as I say and not as I do, with ye Octopus; for ye Octopus, in every issue, violates the rules it has laid down for its satelites, the State Journals. I give below two of those rules, enough to show the absurdity of the demand and the evasion of the same by ye managing editor of the Octopus. In every issue there appear advertisements without the pretense of a formulæ, and some formulæ are given which might as well be Greek, as far as conveying any information goes; and others ads. appear which specifically state what diseases they will 'cure.' An instance of the first mentioned I give here: "——— antipyretic, antineuralgic and hypnotic. A derivative of antipyrin, in which an H atom of the pyrazolon group is replaced by a dimethylamido group." That's as clear as mud. Here is another: "Polantin, patented in Germany, the United States, England, etc. Testimonials from 86 physicians, 326 cases." (no formula) "Benolgurcapsules. Formula: Capsulæ Dipterocarpi Benzoinatæ B. C. C." (Clearer than mud). Another: Unguentine. No formula, but the statement is published tnat 'it has been endorsed and used by the medical profession for many years.' Does Dr. Simmons know what unguentine is made of? Oh, consistency, thy name is not Simmons, by a jug full. The Journal of the California Medical Association is constantly calling on the Octopus to purge its pages or drop the mask of 'ethics,' and The Charlotte Medical Journal says: "The whole cause of the bad ethics so often seen scattered through the reading matter and advertising pages of the Journal is due to Dr. Simmons, and not to the trustees of the Association. He is a cunning politician and a typical commercial gentleman. As long as he has control of the Association Journal it will succeed financially, but will never take a decent stand ethically."

* * * * * *

Here are two of the rules governing the admission of advertisements in ye Octopus, and consequently in its satelites, the State Journal:

"Rule I.—No article will be admitted unless its active medicinal ingredients and the amounts of such ingredients in a given quantity of the article, be furnished for publication."

"Rule 4.—No article will be admitted whose label, package or circular accompanying the package contains the names of diseases, in the treatment of which the article is indicated. The therapeutic indications, properties and doses may be stated."

* * * * * *

The manufacture of prescriptions by wholesale, by learned, honest and capable men to fill an active demand by the medical profession, is a distinct advance in medical science, a convenience and an economy.

I say the use of such articles as are advertised in the red back, is 'ethical," wise, right and proper. I know the vile stuff that is advertised in the papers and they couldn't get in on any terms. Such manufacturers and importers as are represented in my pages are public benefactors and are the ethical physicians' friend and ally.

* * * * * *

Ye Methods.—The methods inaugurated by ye Octopus may be summed up in a few words: Bulldozing, intimidation. threats of ostracism, denunciatian as unethical, exclusion from list of ethical preparations, exclusion of the 85 per cent. of doctors from "Who's Who." In short Trades Unionism!

* * * * * *

The Red Back has ever been the champion and defender of medical ethics, which we understand means pure morals, right living, consideration for others and the rights of others. This, of course, embraces charity, tolerance, right and justice. There is a vast difference between ethics and fanaticism. I want to say here, that I do not consider the use by physicians of the better class of proprietary medicines made for and advertised solely to the medical profession, as a breach of the principles of ethics adopted by The American Medical Association. See Sec. VIII. On the contrary, it is right, proper, and necessary. It is convenient and economical. Such articles are not "secret medicines," "nostrums," in any sense. Every physician knows in a general way what they are composed of and the dose. Our profession claims to be eclectic, broad and comprehensive, and claims the right to use anything and everything for the cure or alleviation of disease, material or immaterial, that experience has shown to be beneficial; and the practice of medicine is, essentially, empirical, in the sense that our knowledge is gained by experience. Who knows how drugs 'cure?' For years the use of quinine was entirely empirical. It had been observed in thousands of cases that it would cure chills, but how? A physician is justified in using anything that his judgment dictates and which he knows from experience or the experience of others will benefit his patient. The dictum from headquarters that he shall not prescribe proprietary medicines is high-handed, dictatorial and an insult to his intelligence; and the assertion that he lets the pharmacist think for him is the veriest tommyrot. The Octopns wants to think for him.

* * * * * *

Will the vast body of American physicians be thus "like dumb cattle driven?" by a fanatical howler for "ethics," which every issue of the Octopus violates according to the standard he has himself established? Or will they demand his removal, and that one of the Davis or Hamilton kind be seated on the tripod, who will make the Journal A. M. A., what it formerly was, and not the laughing stock of many good men, the vehicle of coercion and intimidation, through which our new convert may vent his spleen and dislikes, and show his contempt for his betters by sneering at any movement for the betterment of man, that does not originate with him.—Dr. Daniel in the Texas Medical Journal.

Carbuncles.

Creel has relied on ecthol given internally, in doses of a teaspoonful, in cases of carbuncles, flaxseed poultices applied locally, emptying of pus, scraping out of dead tissue and cleansing with peroxide of hydrogen, after this a topic application of ecthol on absorbent cotton every four to eight hours. The average duration of this treatment in his cases was ten days.—Journal of The American Medical Association.

Awarded
GOLD MEDAL
Louisiana
Purchase
Exposition

The Standard Antiseptic

LISTERINE

Awarded
GOLD MEDAL
Lousiana
Purchase
Exposition

A non-toxic antiseptic of known and definite power, prepared in a form convenient for immediate use, of ready dilution, sightly, pleasant, and sufficiently powerful for all purposes of asepsis; these are advantages which Listerine embodies.

Listerine
Dermatic Soap

An antiseptic detergent for use in the antiseptic treatment of diseases of the skin.

Listerine "Dermatic" Soap contains the essential antiseptic constituents of eucalyptus (1%), mentha, gaultheria and thyme (each 1-2%), which enter into the composition of the well-known antiseptic preparation Listerine, while the quality of excellence of the soap-stock employed as the vehicle for this medication, will be readily apparent when used upon the most delicate skin, and upon the scalp. Listerine "Dermatic" Soap contains no animal fats, and none but the very best vegetable oils; after its manufacture, and before it is "milled" and pressed into cakes a high percentage of an emollient oil is incorporated with the soap, and the smooth, elastic condition of the skin secured by using Listerine "Dermatic" Soap is largely due to the presence of this ingredient. Unusual care is exercised in the preparation of Listerine "Dermatic" Soap, and as the antiseptic constituents of Listerine are added to the soap after it has received its surplus of unsaponified emollient oil, they retain their peculiar antiseptic virtues and fragrance.

Awarded
Gold Medal
Louisiana
Purchase
Exposition

A sample of Listerine Dermatic Soap may be had upon application to the Manufacturers.

Lambert Pharmacal Company, St. Louis, U. S. A.

Awarded
Gold Medal
Louisiana
Purchase
Exposition

PASSIFLORA

(DANIEL'S.)

IN cases of nerve starvation, Daniel's Conct. Tinct. Passiflora Incarnata acts as a stimulating and invigorating food, as well as a sedative and hypnotic. The nerves are quieted and restored by nourishing and strengthening the depressed vital organs. It is the best remedy for hysteria in nervous women because it regulates the heart action, produces composure and gives normal sleep. Passiflora is unequalled in its power to control the nervous system.

SAMPLES SUPPLIED
PHYSICIAN PAYING
EXPRESS CHARGES

WRITE
FOR
LITERATURE.

Laboratory of

JNO. B. DANIEL, Atlanta, Ga.

What Shall It Be?

This question is present in the mind of the busy physician every summer when he confronts the problem of appropriate tonic medication for the weak, poorly-nourished and debilitated. He knows that during no other season of the year is there so marked a tendency to disturbances of the gastro-intestinal tract and that many intractable forms of diarrhœa may result from unsuitable foods and medicines; the first requisite therefore is to select a tonic that has the negative virtue that it will not irritate the sensitive stomach and intestines. Cod liver oil, and the usually employed nutritives and tonics have a well-defined local irritant action on the gastro-intestinal tract, and are unsuitable when these organs are in the super-sensitive condition so commonly present during the heated term; these remedies, experience proves, lack even the negative virtue of non-irritating character.

The next question to be decided is, what remedy has a selective action on the gastro-intestinal mucous membrane whereby its functions are kept in a normal condition? In other words, how may the natural tendency of hot weather to set up irritation of these organs be combatted, and at the same time how can the patient be properly nourished? A moment's thought as to the physiologic effects of Gray's Gly-Tonic Comp. will answer these questions and explain why this remedy is the best tonic and reconstructive for summer use.

First of all, Gray's Tonic is one of the most prompt and reliable gastric sedatives known to the profession; as instance of this it is only necessary to recall its wide-spread use in the gastric irritability and vomiting of pregnancy and sea-sickness. Once having pacified the stomach it exerts very positive effects upon the secretory and motor functions of this organ, manifested by creation of appetite and increased power to digest food. It is a great step forward when these patients can take sufficient quantities of proper food and have the power to digest and assimilate it. Gray's Tonic accomplishes this and as a consequence has a pronounced influence in improving the nutrition of the patient. It thus starts aright the complicated physiological processesses which result in increased blood constituents, more vitality, greater strength, and increased power to resist the inroads of disease.

Let any one who doubts the truth of these statements try Gray's Tonic in any case of malnutrition, general debility or nervous exhaustion existing independently or as a part of chronic organic diseases, and note how well these patients stand the depressing effects of hot weather, how free they are from gastro-intestinal complications, and how beneficial the remedy is upon the general nutrition.

Gray's Glycerine Tonic Comp. owes its distinctive value to the proportion of the contained ingredients and their manner of combination. All imitations lack these characteristics of the original and are consequently of inferior valne. Prescribe in original 16 oz. bottle. At all druggists.

THE PURDUE FREDERICK CO.,
Sole Proprietors, No. 298 Broadway, N. Y.

Dr. G. H. Moran, who for many years has been the leading physician of Morganton, N. C., died in the Salisbury Sanitarium. after an operation for appendicitis. Dr. Moran was 65 years old and was surgeon to the Southern Railway and physician for the Deaf and Dumb Institute of Morganton.

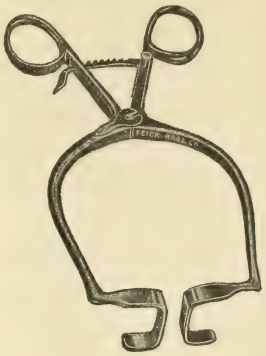
Latent rheumatic conditions are now more prevalent on account of an exceedingly cold and damp spring, causing many recurrent cases of rheumatism, neuralgia and grippe, for which Tongaline Liquid is the standard prescription.

A New Self-Retaining Abdominal Retractor.

A few points of its superiority over Single Retractors:

Stays Still,
Opens Wound Widely,
Manipulated With One Hand,
Liberates Both Hands of Assistant.

PRICE, - - - - - - - - $10.00



FEICK BROS. COMPANY.
Manufacturers Surgical Instruments.
Pittsburg, Pa.

TRADE DERMOL MARK FOR THE COMPLEXION

Contains: Zinc Sozo-Iodolate, Zinc Oxide, Resorcin-Eucalyptol, Ethyl Carbanilate, Oil Pinus Pumilio, Gallanol, Oil Rose and Lanoline.

An elegant and effective ointment for the complexion. Cures Acne, Pimples, Blackheads; removes Sunburn and Freckles. Should be used in connection with Acne Tablets No. 49. Samples for trial and literature submitted upon application.

CHICAGO PHARMACAL CO., 141 Kinzie Street, Chicago, Ill.

PYROCTIN

THE FEVER KILLER

This preparation is introduced to the medical profession as a safe and effective agent in the treatment of all fevers.

Pyroctin Powder
Pyroctin Tablets
Pyroctin and Salol
Pyroctin and Quinine
Pyroctin and Codeine

Samples Sent to Physicians On Request

IT HAS NO DEPRESSING CARDIAC EFFECT.

A perfect and reliable Anodyne, Antipyretic, Sedative, and FEBRIFUGE.

THE PYROCTIN CO., Columbia, S. C.

THE MURRAY DRUG CO., Distributing Agents, Columbia, S. C.

These trade-mark crisscross lines on every package.

Gluten Grits AND **BARLEY CRYSTALS,**
Perfect Breakfast and Dessert Health Cereals.
PANSY FLOUR for Pastry, Cake and Biscuit.
Unlike all other goods. Ask Grocers.
For book of sample, write
FARWELL & RHINES, Watertown, N. Y., U. S. A.

Advantages Over Iodoform.

J. F. DeBoissiere, M. D. M. B. Port of Spain, Trinidad, West Indies, says: "I am much pleased with Campho-Phenique Powder. It has given me entire satisfaction in every case I have tried it. Its advantages over Iodoform are incontestable, wherever the latter may seem indicated. I have also found it a most valuable intestinal antiseptic."

Sample and clinical data supplied upon application to the Campho-Phenique Co., St. Louis, Mo.

SAL HEPATICA

The original effervescing Saline Laxative and Uric Acid Solvent. A combination of the Tonic, Alterative and Laxative Salts similar to the celebrated Bitter Waters of Europe, fortified by addition of Lithium and Sodium Phosphates. It stimulates liver, tones intestinal glands, purifies alimentary tract, improves digestion, assimilation and metabolism. Especially valuable in rheumatism, gout, bilious attacks, constipation. Most efficient in eliminating toxic products from intestinal tract or blood, and correcting vicious or impaired functions.

Write for free samples.

BRISTOL-MYERS CO.,
Brooklyn, New York City.

CAMPHO-PHENIQUE

THE STANDARD ANTISEPTIC POWDER AND LIQUID

For twenty-five years CAMPHO-PHENIQUE has been used and recommended by many of the most prominent men in the medical profession.

As a dressing for simple, chronic and varicose ulcers and other forms of skin affections CAMPHO-PHENIQUE POWDER offers a most satisfactory form of treatment.

Dr. A. H. Ohmann-Dumesnil, Professor of Dermatology and Syphilology in the Marion-Sims College of Medicine, St. Louis, Mo. writes:

"I have treated a number of chronic ulcers with CAMPHO-PHENIQUE POWDER and have obtained most excellent results when other external means had failed. The POWDER was used in a liberal manner and ordered applied twice daily. In some cases it may be necessary to administer citrate of iron and quinine in order to hasten repair."

Prominent American Surgeons Use and Recommend CAMPHO-PHENIQUE.

"As a general surgical antiseptic in minor and major work, it not only inhibits but destroys bacterial growths and renders the field of operation sterile."

Samples, Powder and Liquid with Clinical Data, sent on request to the

CAMPHO-PHENIQUE COMPANY, St. Louis, Mo.

IF YOU WANT QUICK RESULTS USE

SCROFONOL

A NEW TREATMENT FOR

Eczema and Skin Eruptions

Price $1.00 Per Box.

CAMPHO-PHENIQUE COMPANY, St. Louis, Mo.

Passiflora's Province.

In chorea, neurosis and the various nervous diseases of women and children, a calmative is required that combines the properties of a tonic and tissue-builder. Daniel's Conct. Tinct. Passiflora Incarnata meets these requirements and gives results that are satisfying to both physician and patient.

For sufferers from rheumatism and insomnia, two or three teaspoonfuls control the nerves and induce restful steep.

In the case of a young woman in a chronic state of metritis, Passiflora gave results that no other remedy had accomplished.

During the menstrual period, pregnancy, menopause and child-birth, Passiflora should be administered to check or remove irregularities.

For all extreme nervous cases, arising from functional disorders in females, and nervousness produced by over-work or dissipation in both sexes, Daniel's Passiflora allays tension and restores a normal condition.

The Mecklenburg Hotel and Sanitarium's Hydriatic Department which was designed and approved by Dr. Simon Baruch, of New York City, is now under the management of Dr. J. C. Walton, formerly of Danville, Va. It is up-to-date in every respect. Fitted with every known water treatment including the celebrated Schott System of Nauheim Baths and also the system used at Arkansas Hot Springs.

An unusually cold and damp spring is always conducive to the development of much malaria for which Tongaline and Quinine Tablets are almost a specific, Quinine for the fever, Tongaline for eliminating the poisonous secretions.

Soldier's Skull Crushed.

"A soldier in some manner was struck by his gun above the eye; the blow crushing in the outer layer of bone. I removed a couple of Bits of bone, cleaned the wound and applied, first Campho-Phenique liquid, and subsequently the powder, covering the whole with ordinary antiseptic gauze and cotton. The case got along to resolition without any suppuration."

The above is one of the many minor cases, benefited by Campho-Phenique, and sent us by Dr. W. F. Seymour, Tungelow, Chefoo, China. Samples and clinical data mailed upon request to the Campho-Phenique Co., St. Louis, Mo.

Pepsin is undoubtedly one of the most valuable digestive agents of our Meteria Medica, provided a good article is used. Robinson's Lime Juice and Pepsin, we can recommend as possessing merit of high order.

The fact that the manufacturers of this palatable preparation use the purest and best Pepsin, and that every lot made by them is carefully tested, before offering for sale, is a guarantee to the physician that he will certainly obtain the good results he expects from Pepsin.

The home for incipient cases of tuberculosis in Brevard, N. C., conducted by Drs. Cheatham & Garner, is located in the beautiful Sapphire country. It is 2250 feet above the sea level. The buildings are surrounded by wide porches and fitted with all the moderate conveniences and most modern equipment for the treatment of these cases. It is an ideal location and one of the most home-like institutions of this kind.

The Charlotte Medical Journal.

VOL. XXVII. CHARLOTTE, N. C., AUGUST, 1905. No. 2

Importance of Exact Diagnosis in Diseases of the Stomach.*

Chas. W. Moseley, M. D., North Wilkesville, North Carolina.

I have selected this subject, hoping that I might stimulate investigation in this important branch of internal medicine.

In the limits of this paper, I shall not attempt to go into details in regard to the technique of the various analyses proposed by different authors, nor enter into a discussion of the relative merits of different methods of examination.

The text-books of Ewald, Einhorn and Riegel will furnish sufficient discussion and direction along these lines. I do not propose to attempt a learned and elaborate dissertation on diseases of the stomach, but to intimate in a very informal way some of the advantages that may accrue to the internist and the diagnostician by utilizing modern methods of investigation. It is a self-evident proposition that diagnosis, when possible, should precede direction for treatment and should form the basis upon which to make a prognosis. A thorough knowledge of the various functions of the stomach, and the relative digestibility of the different foods were not well understood nor thoroughly investigated until Beaumont made his elaborate and careful observations on St. Martin. Since that time a host of observers and investigators have been working out and perfecting a system of diagnosis and treatment, that is at the same time accurate, rational and scientific.

There is no department of internal medicine in which more rapid strides have been made and none in which the progress has been on more rational and scientific lines.

The functions of the stomach are threefold. 1. The secretory function. 2. The motor function. 3. The absorptive function.

Either one or all three of these functions may be impaired at the same time, or there may be certain mechanical obstructions, either intrinsic or extrinsic, either benign or malignant. We should also be able to recognize gastroptosis and other displacements of the digestive organs and the various neuroses of the stomach. In this difficult task of discrimination, it is important that we should know the secretory, motor and absorptive powers of the stomach, and not only these, but every method of gaining information should be exhausted before we reach a conclusion, and after having made a careful and accurate diagnosis, we can prescribe rational therapeutics and a national regimen.

"When are examinations of the gastric contents necessary? They may be omitted whenever we are able to arrive at a positive diagnosis without them, and in all acute conditions. They are not necessary in chronic conditions which are improving, and in a majority of purely nervous affections. In cases where ulcer is suspected the tube must be used with caution, and if there has been hemorrhage, the tube is positively contraindicated. Cases pointing to a certain secretory disorder (as hyperchlorhydria, gastro succorrhœa continua, periodia or chronica) may be first treated without a verifying examination of the gastric contents, but if this treatment prove unsuccessful, an examination of the gastric contents should be made.

Examinations of the gastric contents should be made in all chronic affections of the stomach with doubtful diagnosis that show but slight evidence of improvement.

These examinations may help us to recognize the following conditions:

1. Chronic gastric catarrh; acidity diminished, the ferments present, free hydrochloric acid variable, mucus present in large number of cases. 2. Achylia gastrica; total absence of gastric juice, no hydrochloric acid, no ferments, total acidity low, almost neutral. 2. Cancer of stomach; in many instances iucipient cancer of the stomach may be recognized by the constant presence of the following symptoms: Free hydrochloric acid absent, lactic acid present, acidity not especially low, sometimes increased, mucus, sometimes small amounts of blackish looking blood and stagnant food. 4. Hyperchlorhydria; free hydrochloric acid present, acidity between 70 and 140. 5. Gastro succorrhœa continua chronica, presence of about 60 to 140 c.c. of clear gastric juice in the fasting condition. 6. Erosions of the stomach, presence of a few small pieces of the gastric mucosa in the wash water of the stomach in the fasting condition. 7. Ischo chymia; presence of food in the stomach in the fasting condition."

The results of examinations of the stomach contents are useful to aid us in diagnosis, but are not to be depended on to the exclusion of other clinical methods. We should combine all the data at hand before arriving at a conclusion. In this way, they will be of considerable help to us.

* Read before the recent meeting of the North Carolina Medical Society at Greensboro.

The motor functions of the stomach may be tested in various ways. I will call attention to Leube's method which is the oldest method. It consists in washing out the stomach six or seven hours after a large meal. Normally, the stomach is found empty at that time. When large quantities of food remains, it shows that the motor function is retarded. Washing out the stomach two or three hours after a smaller meal like Ewald's test breakfast may serve the same purpose for normally the stomach is then found empty. The second method I will mention is examination of the stomach in the fasting condition. The best and easiest way to test the motor function of the stomach is to examine this organ by means of the tube and lavage in the morning in the fasting condition after the ingestion of a substantial supper the night before. It will be seen from the above that there is no difficulty presented in testing the motor function of the stomach.

The use of the stomach tube is also useful in helping us to differentiate between dilatation and stagnation due to simple atony of the stomach wall and dilatation due to stenosis of the pylorus.

Several hours after a meal in dilatation due to stenosis, you would find, on aspiration, the fluids mostly escaped from the stomach, but in dilatation due to simple atony you would find a large quantity of fluids mixed with the food, owing to the weak expulsive force of the stomach walls. While the use of the tube is not imperative in the neuroses of the stomach, yet it often helps us, at least negatively, in establishing a diagnosis.

If after repeated examination we are able to exclude any serious organic or functional disease, if we find the secretion of hydrochloric acid variable, and if other clinical symptoms corroborate these findings, we may reasonably conclude that we are dealing with a neurosis. In suspected gastroptosis we have as an aid to diagnosis, inspection, inflation with air, inflation with gas, Kemp's stomach whistle and Einhorn's gastro diaphane. I have purposely avoided giving details in regard to examination of the secretory and absorptive functions of the stomach, the first is rather too lengthy for the limits of my paper and the second is of minor importance.

After presenting to you in a general way some of the helps to accurate diagnosis, I desire to report a few cases showing the value of at least being reasonably certain in our estimate of the patient's condition.

Mr. A. was seen in one of the clinics of New York City three or four years ago. He was from Scotland and had been suffering from some form of stomach trouble for years. He had gone the rounds of the physicians of his acquaintance and had consulted a number of men of more or less distinction, being told that he had a severe case of indigestion. He had been given tonics, stomachics, laxatives, etc., ad nauseum, without getting any decided results. In fact, he seemed to be in the same condition as the woman who had the issue of blood mentioned in the scriptures. Of whom it was said: "She had suffered many things of many physicians and had spent all that she had and was nothing bettered, but rather grew worse."

The gentleman had lost his position as teacher in one of the colleges of his native land and had come to America discouraged and despondent. In this condition he presented himself at the clinic, and an assistant decided to do what had not been done, to make a thorough repeated examination of the stomach contents after a test breakfast.

It was found on the first and each subsequent examination that there was total absence of hydeochloric acid, either free or combined. There was no pepsin, no rennet, or rennet zymogen, in other words, he had a typical case of achylia gastrica in which the power of digestion in the stomach had been completely and permanently lost and the solution of the case hinged on giving the patient the proper diet and keeping the bowels in the proper condition and improving the motor function of the stomach. All the medicines he had before taken in the vain attempt to stimulate his digestive powers had rarely benefitted him, often proving positively injurious. The treatment consisted in the prohibition of meats and coarse vegetables. Starchy foods were allowed to predominate and he was allowed some fat in the form of fresh butter, cream, etc. and a reasonable quantity of vegetable proteids. Special emphasis was placed on the improvement of the motor powers of the stomach and a systematic course of electricity and lavage was given. As it is a well-known fact that if the motor powers of the stomach remain unimpaired, the bowels will vicariously take up the work of the stomach within certain limitations.

The patient referred to stated that so long as he avoided meats and certain of the prohibited vegetables, that he was comparatively happy and practically free from inconvenience, but that if he disregarded his instructions and ate meats and other forbidden foods which are normally digested largely in the stomach, he suffered considerable inconvenience. I know that the above case is an unusual one and such cases are comparatively rare, yet many such cases, no doubt, have gone from bad to worse and have suffered many things at the hands of

physicians because a proper diagnosis had not been made. It is worse than useless to treat such a case with the various stock prescriptions for indigestion.

I would not have you think that all cases of stomach trouble present difficulties in diagnosis. I would not have you believe that all cases require aspiration and examination of stomach contents. I do believe that all should be able to make such examinations when necessary and thus be in a position to intelligently treat his patient and give proper directions as to diet and mode of life.

Case II.—Mr. C., aged 50 years; consulted me last summer, complaining of a sense of fullness in the epigastrium. An intense burning in the stomach nearly all the time, patient seems to have eaten the ordinary foods in reasonable quantities, yet he did not experience hunger. The urine was very scanty and high colored, and patient wore a very anxious expression and was very desirous of obtaining relief, as he said life was almost a burden. He had given up his ordinary pursuits. Constipation pronounced. When seen at 12 m., the patient had taken breakfast at 6 a. m. and had driven twelve miles to my office. He stated that he had taken nothing since breakfast, not even a drink of water. Examination revealed the following inspection: The region of the stomach seemed very full and rather sharply outlined. Percussion revealed the splashing sound very distinctly two inches below the umbilicus. On aspiration, I obtained a large amount of fluid (possibly one and one-half pints) mixed with food which on standing separated into three layers.

In the bottom, fine particles of food, in the middle an amber-colored liquid, and on top a dark looking, foul-smelling, decomposed fermented mass of retention products.

Chemical examinations revealed: acidity very high, free hydrochloric acid in excess, digestion of starches much retarded. On these findings, a diagnosis of dilatation due to simple atony of the stomach wall with hypersecretion and hyperchlorhydria was made. The treatment consisted in the proper regulation of the diet, liquid foods in reasonable quantities, as soups, milk, etc. Buttered toast was ordered, and white meats in small quantities were allowed at the regular meals, and toast with a glass of milk between meals. The patient was instructed to masticate very thoroughly and take rather small meals, but to take five meals per day as I have indicated. All red meats and coarse vegetables and vegetables containing seeds were prohibited.

The medicinal treatment was:

F. E. Condurango ʒi$\frac{ss}{}$

Tr. Belladonna ʒii

M. and Sig. Thirty drops in water half hour before the regular meals with large doses of bismuth subnitrate.

Powd. rhei

Bicarb. Soda

Magnesia Usta a a ʒiv

M. and Sig. One-half teaspoonful one or two hours after meals. The improvement was continuous and noticeable from the first and the patient remained comfortable as long as he was under my observation.

I feel sure that if the patient should resume his former diet of fried meats and large amounts of pork and coarse vegetables that there would be a return of the symptoms and that the patient would be forced to seek relief again. I would state in passing that I do not keep up the diet list indefinitely, but the patient is allowed to resume his ordinary food within certain limits after the improvemeni is pronounced.

In the above case, had I had the opportunity, I should have used lavage and intragastric electricity.

There are many other conditions of the stomach which may be easily recognized by the data that may be gathered from a careful and painstaking examination.

Ehe scope of this paper does not admit of a detailed discussion of them all, but I shall be repaid if I have brought out anything to stimulate the general practitioner, or help him in his work along the line of a more thorough investigation of a class of diseases so often relegated to the charlatan.

It is not my purpose to unduly magnify the importance of diseases of the stomach, much less to claim that they are always amenable to treatment, but to try to clear up some of the misconceptions that have gathered around the subject, and I hope and predict that in the near future that the general profession will be as conversant with the improved methods of examination of diseases of the stomach as they already are in the other departments of clinical medicine.

They do not require expensive apparatus, the technique is not intricate or difficult, the results are usually encouraging and the field inviting.

A Proper Milk Supply for the Cities and Towns of North Carolina.*

By Joseph Graham, M. D., Raleigh, N. C.

Next to bread and water, milk is probably more commonly used than any other articles of food or drink.

*Read before the recent meeting of the North Carolina Medical Society at Greensboro.

In cities and towns almost every home receives daily a supply of milk and cream. This is used at every meal and, with few exceptions, by every member of the household. It is an article of food in which every one may be said to be interested. Milk is a nutritious, economical and with many a favorite food. It is a very cheap food as it contains more nutritive matter than can be obtained at the same cost in other foods.

Milk is generally used in the raw state. Most other foods are cooked before they are eaten and most, if not all, the bacteria they contain are killed by the heat.

We have no simple means by which we can definitely determine the purity of milk. The quality of most foods can be judged by by their appearance. This is not the case with milk. There is no other article of food which can be adulterated or contaminated, without changing its appearance, to such an extent as milk. The fact that milk appears perfectly sweet is not a proof of its purity, for if the germs are already in it, the harmful changes may take place after it enters the stomach. Then, too, some disease-producing germs do not cause souring of the milk; and therefore their presence is not detected.

Impure milk may cause serious and even fatal diseases. Frequently cow's milk is the only nourishment taken by infants and invalids, and it is these who are least able to withstand the ill effects of impure foods. Every year more children have to be nourished with substitutes for mother's milk. Usually cow's milk is selected; and when pure, there is no superior food for this purpose.

About one-third of all deaths are of inrants and a very large percentage of these die from diseases of the digestive tract. These diseases are mainly due to impure food. It is therefore reasonable to assert that the mortality of infants has a close relationship to the wholesomeness of the milk supply.

Milk is the most suitable culture medium we possess for the growth of germs. These germs grow and elaborate poisons both before and after it is taken into the infant's stomach.

The agency of milk in the spread of contagious diseases has only lately been appreciated, Outbreaks of diseases have been definitely traced to infected milk. Among the most common diseases carried in this way are typhoid fever, diptheria and scarlet fever. There is little doubt that tuberculosis is also spread in the same. In 1900 Kobor collected records of 330 epidemics which were spread by milk. These illustrate very well how the milk most frequently becomes infected. There were 195 outbreaks of typhoid fever, 99 of scarlet fever and 36 of diphtheria. In the typhoid epidemics, the disease prevailed at the dairy in 148 instances; in 67, the milk was diluted with infected well water; in 34 cases the employees acted as nurses, and in 10 they continued at work for a while, although themselves suffering from the disease; in one instance it was found that the milk cans were washed with cloths used about patients; in two cases, the dairy employees were connected with the night soil service.

Of the 99 epidemics of scarlet fever there were diseases at the farm or dairy in 68 instances. In the other instances the dairy employees acted as nurses or lodged in infected houses. As it is difficult to procure cow's milk sufficiently free from germs, we have tried to find some safe way to destroy the germs already present. There are two classes of apparatus used to destroy germs; one known as a sterilizer, which sterilizes the milk at a boiling temperature 212 deg. F., the other called a pasteurizer, killing the germs at a much lower temperature.

There are certain disadvantages in sterilizing milk. The taste is very considerably changed, such milk is very much more constipating and more difficult of digestion; also, it seems to be less nutritious—certainly children do not thrive as well when fed on sterilized milk as when nourished with pure, raw cow's milk. Pasteurization of the milk produces less change in the constituents of milk than sterilization and as it is sufficiently thorough in the destruction of germs, it has become the most popular method of sterilization.

Sterilization of milk has certain limitations. Heating milk destroys only living organizations, it does not kill spores nor does it remove toxins or poisons. Before sterilization, milk may already contain the products of bacterial growth in such quantity and of such a character as to render it wholly unfit for food. Even though just sterilized, it may still be poisonous to an infant, for sterilization will not kill the products of bacterial growth. It is therefore very important that sterilization be done at the earliest possible moment.

We must always remember that sterilized milk is more difficult of digestion. The only value of sterilization is in preventing disease: first, by enabling us to feed infants upon milk in which no considerable fermentative changes have occurred; and second, by destroying disease, producing germs with which the milk may have become accidentally contaminated. Milk can never be made pure after it has once

been badly contaminated. *These methods are only meant for somewhat improviug conditions which should have been prevented!* The expediency of pasteurization as well as sterilization may be considered doubtful.

It would be far more desirable to use absolutely natural milk from perfectly healthy cows, and so, have it good, pure and safe.

The milk supply of Raleigh, my home town, so far as I have investigated, is unnecessarily impure. This fact I have learned through sad bedside experiences, inspection of the dairies and by repeated examination of samples of milk bought in the open market. The attention of the Board of Health was called to this matter and a Committee was appointed by the Board of Health to inspect all the dairies and to employ a bacteriologist and chemist to examine samples of milk from all of our dairies. This Committee was instructed to devise a plan to correct any evils they might find.

The result of the dairy inspections, together with the bacteriological and chemical reports showed conclusively that the milk supply was unnecessarily impure.

Forty samples of milk were examined by Dr. F. L. Stevens, of the A. & M. College. These examinations showed that the nutritive quality of the milk was very satisfactory.

Twenty-two samples were examined for streptococci. "In one instance streptococci were found in considerable numbers. In five other instances streptococci are recorded as being present. Therefore streptococci were found to be present in 30% of the samples examined.

Of the forty samples examined there was no sample bearing less than 34,000 germs to the cubic c. m., and only eight samples run less than 100,000. These eight were all collected on cold days. Seventeen samples out of 39 run above 1,000,000 germs per cubic c. m., and four samples run above 4,000,000, six samples are between 500,000 and 1,000,000.

These numbers are exceedingly high, very much higher than would be expected or than has been found in any city the size of Raleigh in which the milk reaches the consumer so soon after milking.

The relation between the number of germs and the amount of dirt in the milk is clearly set forth in the following sable representing the analysis of three samples:

Sample No.	Dirt m. g. per Litre.	No. germ per c. c. m.
1	36.8	12,897,600
2	20.7	7,079,820
3	5.2	3,338,775

The curd test was used in 28 instances and fourteen samples were found to be gasey.

The high number of germs found in Raleigh milk is to be attributed to two causes: First, improper handling of the milk, and uncleanliness of the utensils that the milk has come in contact with, and second, failure to cool out the animal heat immediately after milking, and the improper temperature at which the milk has been kept.

Therefore the Committee suggested to the Board of Health, that they request the Board of Aldermen to appoint a Milk Commission to control and regulate the milk supply. This Milk Commission shou d consist of five members—the Mayor, Superintendent of Health and three representative citizens. The Board of Aldermen should require each dairyman selling milk in the city to procure a milk license. This license can be revoked if the Milk Commission advises revocation for good and sufficient reasons. This Milk Commission should employ a Chemist and Bacteriologist to examine samples of milk at least once a month, and also a Dairy Inspector to inspect the dairies at least once a month and to examine the animals for tuberculosis at least once a year. I consider the tuberculin-test very important, for recently, in one Raleigh herd of 18 cattle, six, or $33\frac{1}{3}$ per cent., were found to have tuberculosis. *All new cattle should be tested for tuberculosis before they are bought by the dairymen and added to the dairy herds.*

It should be the duty of the Dairy Inspector to examine the cattle, drainage, ventilation, food, water, yards, pastures, methods of milking and handling the milk, and all matters connected with the health-management and care of the animals. He should see especially to the health of the animals, cleanliness of the barns, proper disposal of manure. Also he should see that there is an abundance of pure water, *that the milk is immediately cooled after milking and that there are proper facilities for cleaning and sterilizing all bottles and dairy utensils.*

The Superintendent of Health should examine all persons working about the dairy or in any way connected with the care of the animals, milk and utensils, and the transportation and delivery of milk, in relation to their habits of cleanliness as well as for transmissible diseases.

The Bacteriologist should examine the milk to test the efficiency of the methods in force. He should take samples from the consumer, in original packages as delivered by the dairymen, and by bacterior logical and microscopic examination determine the nature of the bacterial contents and if pus cells are present. His examina

tions should be made every few weeks and will be the truest indication of the thoroughness with which the Milk Commission's requirements are being followed. I think the bacterial standard of purity should not be adopted until the Commission has been working for several months so as to ascertain *the proper standard.*

The chemical examinations should be made sufficiently often to determine if the milk be of correct composition, of requisite richness and free from adulterations.

In one instance we learned that the manager of a dairy was using a strong solution of formalin to preserve his milk.

The report of this committee was presented to the Raleigh Academy of Medicine. The Academy strongly endorsed it and recommended its adodtion by the Board of Aldermen.

It is sincerely hoped that our Board of Aldermen will adopt some such plan. I believe this is the ideal way in which to control and regulate the milk supply. I believe it is practicable and will produce the desired result and at the same time will exert little hardship upon our dairymen.

This plan is not expensive. We estimate that we can operate our Milk Commission and employ a Dairy Inspector and a Bacteriologist and Chemist for $600 a year. The dairymen will have to bear only a small part of this expense, as they will be charged a very moderate fee for license to sell milk.

For the production of pure milk, fine buildings, fine cattle add expensive apparatus are not at all necessary. At least ninety-nine per cent. of the contamination of milk *occurs after the milk leaves the cow.* To prevent such contamination, cleanliness and constant care are absolutely necessary.

At present it is impossible, in most of the towns of this State, to get the health authorities to adopt proper ordinances for the control of the milk supply. The greatest obstacle to municipal control of the milk supply is the fact, *the public does not yet appreciate the absolute necessity for such control and the danger of using impure milk!*

In every community much can be done towards improving at least a portion of the milk supply by the local medical organization. It is in the power of the physicians of every town to control at least a portion of the milk supply. Each local medical society can form an agreement with the leading dairymen of the town to furnish milk according to their requirements in return for their endorsement of the purity of their milk.

A certificate, given by the local medical organization and stating that a dairy is conducted in an approved manner, would be verp useful to a milk seller by enabling him to secure better prices and new trade; for many of the best class of milk users would value the assurance thus given. When it becomes known throughout a town that a certain dairy has been awarded a special certificate on account of the excellence of its methods, its business will immediately increase and to such an extent that other dairies will soon be pressing for examinations in order that they may secure similar certificates. In order to make the plan still more attractive to the dairymen, it would be well to bring the matter before the public by periodically publishing the lists of approved or certified dairies and making brief but pointed statements of the objects of the system and of the way to obtain the endorsement.

Any one, seeing the list, would naturally look for his milk man's name on the list; and, if not found, explanations would be sought. Without doubt, many would insist that those supplying them be on the list. In this way the dairyman would receive a better price for his milk and would be enabled to pay the fees of the local Milk Commission for examining his dairy and product.

The objection may be made made, that the small dairyman *cannot afford* to conduct his place in the proper way, and that therefore the plan proposed is unfair. The answer to this objection is, that a small dairy can be conducted in a cleanly way as well as a large one. Those having only a few cows and whose interests are mainly in other lines might not find it profitable, but the necessary improvements need not be out of the reach of farmers with large or even small herds if they are determined to do the thing right and give it all the necessary attention. There is no good reason why those who wish to progress should be deterred by the fact that all cannot reach the highest standard.

One of the principal advantages of this plan is that it can be easily inaugurated and that those who wish to be helped by it can quickly get the benefits. That numerous class who would oppose the enactment of these regulations into laws (for the reason that they would not care to be governed by them) would have no ground for a *valid* objection because of the *voluntary* feature of the plan suggested. No one would be *compelled* to come under the Commission and its rules.

A second advantage is, that it gives reliable information to consumers as to where to secure to best milk produced; and they are no longer compelled to depend upon

the *appearance* of the milk or the *statements of the dairymen.*

The marked improvement of a few dairies would have a beneficial effect on the entire supdly; and the badly-kept dairies would be obliged to improve to keep their trade. The increased receipts from higher prices and enlarged trade should enable the dairymen to pay moderate prices for certificates.

In some cases, it might be better for the local medical organization to establish a Milk Commission upon a philanthropic basis and demonstrate its value; then the dairymen would gladly pay the expenses.

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Life Insurance Examinations: The Duties and Obligations of all Parties Concerned, Namely, the Soliciting Agent, the Applicant, the Doctor and the Insurance Company.

By O. L. Denning, M. D., Dunn, N. C.

While this paper is written mainly with the idea of setting forth the duties and just financial compensation of the examining physician, yet it is necessary to mention the other parties as his duties are so closely connected with theirs and yet his services are, n some respects, different from each of the jothers.

First, the Soliciting Agent: We take it for granted that he is a high-toned, honorable gentleman or the Company would not wish his services, but still he is liable to be mistaken in judging an applicant and the doctor must be on his guard not to allow the agent's good description, either oral or written, of the applicant make him any the less careful in his examination. On the other hand, we must be careful not to find defects in the risk, when in reality none exist.

Promptness in attending to the examinations as soon as you are in receipt of the application is the key to making the agent successful in securing business for the Company. This very promptness is what often causes the doctor to lose more from his practice than he earns by the examination, for he feels that he must go at once, even though it be a long distance in the country, and when he returns often finds that some of his best patients have had to secure the services of another physician. On the other hand, if he postpones his examination, he may later go, only to find the applicant has changed his mind or has given the insurance to some other agent. An accident like this is sure to bring you into disfavor with both agent and Company.

Second, the Applicant: We will take it for granted that he is perfectly honest in his statements, but even then through ignorance or by being misinformed, he may deceive you about some disease of vital importance to the Company. On the other hand, a hyper-conscientious applicant may magnify trivial ailments to such an extent that he would surely be rejected, so it is our duty to listen to all he has to say, examine closely and give only facts and not imaginary diseases to the medical director. The doctor's good common sense in this respect is what makes his services of value to the Company, for in the first instance, by carelessness he can easily be lead into recommending a hazardous risk to the Company, who would in all probability issue a policy; and, in the second instance, by being too easily convinced that a temporary trivial ailment was some chronic incurable disease, he could cause the rejection of the applicant, thereby being the means of withholding good paying business from the Company, who, on the other hand, was paying you to recommend just such risks.

Third, the Doctor: The duties of the physician are partly set forth to the Company in mentioning his duties to the applicant and agent. In addition to this, he should prepare himself for making examinations; have available a urinalysis test case, a stethoscope, and a tape line. Be sure to always measure, make a careful urinalysis, because the urine is often the only clue you can get to an approaching disease which unfits the applicant for life insurance; and make a careful examination of the lungs, heart and liver. In case you are in possession of facts not stated by the applicant which would be of service to the Company, you should notify same by private letter.

Fourth, the Insurance Company: The Companies, as a rule, require that their examiners be men of ability, integrity and experience, and prefer them being members

*Read before the recent meeting of the North Carolina Medical Society at Greensboro.

of worthy and standard medical societies. They exact and require the most careful of service, they do not make allowances for extra trouble and long distances, and later inquiries they may see fit to make. Until a recent date nearly all Companies allowed a $5.00 fee for ordinary examinations requiring urinalysis and a $3.00 fee for the same examination without the urinalysis. This fee has been and is still satisfactory. But recently some of the Companies have formed an agreement to reduce the examiners fee to $3.00 for all examinations under $2500.00 or $3000.00. The amount of work, responsibility, other troubles and expenses are in no way made less for us, and a $1000.00 applicant requires the same careful examination as a $5000.00 applicant. Furthermore, the majority of applicants apply for one or two thousand dollar policies, so it virtually means that we will be cut off from our $5.00 fee to which we are so justly entitled. The Companies claim that owing to competition and small profits on premiums, they cannot afford to pay but $3.00, but the official records show different. In 1902 there were 14 Southern States that paid in premiums to Northern Insurance Company's $45,484,555 and these Company's paid back in that year only $15,578,163, and in 1903 $51,-906,825, $18 078.750, thus leaving a clear profit to the Companies of $63,634,467.

So many Companies are now trying to join this reduction of fees, that it has become absolutely necessary for the medical profession to come together to protect itself and fight this unjust reduction. This is in no sense a "strike" by us, but simply an honest effort to maintain our own and receive just financial compensation for the services required of us. If we submit to this reduction, it will be just as easy in two more years for them to offer us only $2.00 and then in a few more years only $1.00, when we would scarcely get pay for our time much less our knowledge of a desirable or an undesirable risk. The Companies argue that it does not take much time from the doctor's practice, but the time it takes is not the true value, but our ability to make a satisfactory examination. If it is only time they expect to pay for, they can engage some men at 25c an hour to write the answers on the blank, but the Company will say at once that this is not the man desired. No, what they wish is a $5.00 man for $3.00.

Fellow physicians, our services and knowledge are worth $5.00 to any Company; don't sell yourself cheap; other people value you as you value yourself. The Companies will pay us the $5.00 fee as of old if we come together and state our case fairly before them. In case any Company should not agree to give you the just $5.00 fee, politely refuse to do the work. Withdraw your influence from such a Company, do not answer any inquiry they may make concerning one of patients unless the inquiry is accompanied by a $2.50 check. Speak a good word for your friendly agent, whose Company is willing to pay for your services, and soon we will be rid of all so-called $3.00 Companies. They will either see their mistake and give you the just $5.00 fee or withdraw from your immediate territory, thus leaving the $5.00 Companies in full control of all the business. I speak from experience. One Company who has tried to force this $3.00 rule in our section has only been able to get one ordinary examination made by a doctor since the first of January, 1905. The poor agent had to pay the extra $2.00 required, then resigned and began work for another Company. The $5.00 fee is a strict rule of our Medical Society and if every medical society in the State and then in the United States would adopt the same rule, we will save ourselves from eventually working for nothing.

Since the first of this year, several Companies have tried to reduce the fee by endeavoring to change medical examiners, but in our Society we all work as one, so that some of the Companies very thoughtfully returned to the $5.00 fee while a few others have held out at the expense of getting none, or scarcely any business.

I sincerely trust that the Societies, each and every one, all over the State will adopt the $5.00 fee rule as has the Harnett County Medical Society and some others already.

Electro-Therapy in Epithelioma.*

By W. T. Parrott, M. D., Kinston, N. C., Ex-Visiting Student Great Armond Hospital, London, England; Captain-Surgeon North Carolina Natioal Guard; First Vice-President Seaboard Medical Society of Virginia and North Carolina; Member Medical Society State of North Carolina.

Gentlemen of the Medical Society of the State of North Carolina:

In presenting this short paper I shall only deal with expithelioma and its best method of treatment, i. e., the electro-therapeutic method. In arriving at such a conclusion, a comparison of the various methods from the almost prehistoric arsenic paste down to the days of aseptic.

Extiration has convinced me that the X-ray combined with the judicious use of the Minim light and other accessories is by far the safest, best, and most permanent method. Failures have and will occur, but in most cases they are due to faulty diag-

* Read before the recent meeting of the North Carolina Medical Society at Greensboro.

nosis and improper use of electricity. A careful study of the neoplasm, both micro and macroscopic, can only enable a man to state accurately that he has cured a genuine cancer with any method. Clinical symptoms are not alone sufficient and many a medical man has cast opprobria upon the profession's ability to deal with cancer by an improper diagnosis and permitted the quacks to enjoy the reward in curing exuberant granulations. I am not desirious of the sobriquet "Cancer Doctor," but it behooves medical men to wake up to the fact that this class of cases have been sadly neglected and can be dealt with in a scientific manner. Snap diagnosis and careless treatment has forced many unfortunates to the tender mercies of the quacks and a premature grave. Out of impricism and ignorance the microscopic has lifted us and electro-therapy limited surgical measures. It requires a great deal of time and patience to properly employ electro-therapy, however, and the unfavorable experience of the tyro must not be taken as a criterion of its worth. The average medical school does not give in its curriculum sufficient instructions in electrics to enable its graduates to employ electricity judiciously, and the man who attempts it from a theoretical knowledge is usually disappointed.

Of the two great groups of epithelioma, those of the tubular variety give us the greatest trouble in treating. Those of the flat-cell variety is usually more amenable and not so prone to recurrence. In the use of X-ray to this class, auto-infection is at times a very dangerous complication and sequelæ and demands like a burn an abrupt termination of treatment. The patabolic effect of the rays on the sloughing neoplasm throwing into the lymphatic circulation so much sceptic material as to produce sudden and distressing constitutional symptoms. The patients may seize suddenly with rigor, then fever of a characteristic curve and with diarrhœa and depression gives us a typical picture of sceptic fever. As a rule, however, no sudden onset of symptoms develop but appear more insidiously. Patient's general condition should be noted carefully and temperature as closely taken as in typhoid. I nearly always put cancer patients on nutrient tonics two or three weeks before beginning treatment, especially as they usually come with the emaciated cachexia. My preference is a solution of peptonate iron, arsenic and maganese, given after meals in milk, combined with eliminants and careful daily cleansing of the neoplasm. A fact very hard to explain, that the constant use of X-rays is prone to produce epithelioma on the workers hand, if unprotected and amputation has in a recent notable instance been necessary. Following the first law of nature, the operator should in all instances protect his own hands, especially in prolonged or continuous treatment. Physiologically, the first noticeable effect of X-ray on the neoplasm is stimulant followed by intro-cellular disarrangements and degeneration, then absorption, and finally recovery of the tissue to its normal state,

It is in this lympathatic absorption that we are most interested when symptoms of intoxication supervene. Five very important, and I might say, cardinal, considerations present themselves in the X-ray treatment of epithelioma.

1. The differential diagnosis of the tumor at hand.

2. Its location, which if superficial, a tube with a three-inch spark length should be used, though if lesion deep, a five-inch spark must be employed.

3. The distance is a very important consideration and should never be greater than ten inches to begin with, carefully noting effect and treatment discontinued at first appearance of dermatitis in surrounding tissue.

The physio-chemical change in the neoplasm varies directly with the duration of the exposure and inversely with the square of the distance of the tube's center.

The fourth great consideration then is the duration of seance. Note carefully any idiosyacrosy existing in patient, and if no harm results in two full weeks after first exposure, treatment may be begun again; this time every fifth day, gradually bringing the treatment down to daily sittings. It is a good plan to let your patient severely alone upon first appearance of dermatitis, and only begin again when symptoms entirely gone. In two cases when a rather severe dermatitis was produced, I obtained a most happy effect from the minim light, and as the anæmic action of this agent very prompt, I consider it valuable in treating an X-ray burn. I was enabled in these cases to restore the skin to its normal condition and begin treatment again much earlier than if the best soothing lotions had been employed.

5. Tissue surrounding the tumor should in all cases be thoroughly protected. I employ tinfoil on patient and consider it a better way than to protect tube, except at convergence rays. Both plans might be used conjointly, however.

I have the honor here to report tersely four typical cases of epithelioma treated with the X-ray and the minin light.

Case I.—Gentleman, age 65. Seen first in June with tumor size of two king marbles on left face. Occupation shoemaker. Family history positive as to epithelioma.

Patient himself had cancer in 1887, which was removed surgically. It was situated near present one on left face. He was very much emaciated, with characteristic cachexia, growth of tubular variety. Much pain which was only controlled by morphia and local application of cocaine. He was put on tonics, aliminants, and general supportive treatment. A week's application of the minin light, given an hour at each seance reduced the pain so much that his anodynes were almost entirely discontinued. On August 1st, he began on the rays, with a high vacuum tube, ten inch distance for ten minutes. After two weeks no dermatitis resulting, he was given the rays every fifth night, the minin light alternating. Gradually (all symptoms of pain, itching, etc., gone) he was given a daily treatment, although no reduction in size of tumor resulted until October 1st, when some reduction in size was noted. Near the middle of the month marked symptoms of autoinfection arose. Slight chill, fever, and quick sweats forced us to abandon treatment. Under rest and treatment improved, and the rays again cautiously applied. The reduction in size of tumor from now on to January 15, 1905, was very gratifying, both to physician and patient, but on this date a severe burn resulted—the patient losing a small area of his whiskers. The reduction in size of tumor went on under the use of the minin light until February 15th, when we began the rays again, it was almost entirely gone. On March 15th, he was discharged, cured, and but for the slight area of hair which was destroyed on the face, nothing was left to show that an epithelioma ever existed. His cachexia is gone and there is a marked improvement in his general condition. At a recent meeting of the Lenoir County Medical Society attention was called to the advantage of the electrical treatment over surgical removal, as in the latter a very unsightly scar had been left when his first tumor was extirpated in 1887.

Case II.—Lady, age 48; occupation, nurse. Began treatment November 16, 1904, suffering now lancing pain in large tumor on right nose which was rapidly growing, while waiting for the diagnosis. A true epithelioma was made out, despite the fact that the family history was negative. Very cautiously the rays were used weekly, alternating with the minin light until her toleration was determined, and on April 26, 1905, she was discharged, cured.

Case III.—Gentleman, aged 46; occupation, farmer. Family history cancerous. Some months ago noticed small fissure in middle lower lip which became ulcerated and painful Came to me December 24, 1904. Had been previously taking antisyph, treatment, though no evidence of syphilis were found by me and this was excluded. The neoplasm by this time involved nearly half of the lip and he was promptly put under X-ray and Minin light. He has made a slow improvement since January 15, when treatment was temporarily abandoned on account of a slight burn.

Case IV.—Gentleman, age 48; occupation, farmer. Family history negative. Admitted November 16, 1904. First noticed tumor on left face one-half year ago, which gradually increased in size to that of an acorn. No microscopical examination was permitted, but the increasing pain and clinical aspects led me to believe it epithelioma. He was given the rays, low tube, ten inches 10 minutes, and after two weeks and no surrounding burn resulting, both the Minin light and X-ray were used at shorter intervals. On February 8th, he was discharged, entirely cured.

Urethro-Rectal Fistulae.*

By A. J. Crowell, M.D., Charlotte, N. C., Professor of Genito-Urinary, Rectal and Skin Diseases in the North Carolina Medical Society; Visiting Surgeon to Presbyterian Hospital, Charlotte, N. C.

In presenting this paper, we have nothing new to offer you, but wish to bring out an operation for urethro-rectal fistula that promises great things for this rare yet very unpleasant and even dangerous condition. Though rare, it occurs sufficiently often to justify us in giving a detailed description of an operation described by Dr. Tuttle, of New York City, which has proved successful in all his operations for this condition up to the present, prior to which time, but few reported cures from all previous operations are on record; that is, for chronic fistulæ.

This condition consists in an abnormal communication between the urethra and the rectum. In the majority of cases this originates in the urethra and burrows backward and downward into the rectum. The urine escapes into the rectum much more frequently than the intestinal contents into the urethra. This is due to the course of the fistulous tract and the urine being more fluid. The downward and backward direction of the tract is not invariable, as we will readily see when we take up the etiology of the trouble. In about 3⅓ per cent. of Dr. Tuttle's cases the course of the tract would indicate rectal origin.

The etiology may be classified as traumatic and pathological. In the traumatic varieties the most frequent causes are false passages made by passing instruments through the urethra or by traumatism, produced by

* Read before the recent meeting of the North Carolina Medical Society at Greensboro.

such instruments not necessarily having penetrated the urethral wall, but sufficient to destroy the mucous membrane, allowing the extravisation of urine and the formation of abscess which often rupture into the rectum. Internal urethrotomy or divulsion of stricture in the membranous or prostatic urethra, and operations for stone, enlarged prostate, foreigh bodies, and operations on the rectum, are frequent causes of fistulæ. A fistula produced by the removal of the prostate gland or stone, foreign bodies, etc., from the bladder usually heal spontaneously on account of the free drainage we have through the perineum. Those produced by pathological conditions are malignant growths of the prostate or rectum, which may result in a communication between these two organs, but only in the latter stages of the disease. Tubercular, syphilitic, or simple catarrhal ulceration of the rectum may result in urethro-rectal fistula.

Diseases of the prostatic and membranous urethra are the etiological factors in the great majority of urethro-rectal fistulæ, in that stricture is the most frequent cause, and they are located usually just anterior to the membranous urethra. The obstruction to the current during micturation forces the urine out into the peri-urethral tissue, after the urethral wall becomes so weakened that it is unable to resist the undue force produced by this undue obstruction, pyogenic bacteria gain entrance into the peri-urethral tissue an abscess is formed, and often ruptures into the rectum. Where an abscess forms in the prostatic urethra the capsule of the gland will prevent burrowing, and the fistulous tract will usually be very short. The abscess may open into the urethra first, and then burrow into the rectum for want of drainage, but the danger of urethro-rectal fistula, from an abscess of the prostate is much less when the abscess opens into the urethra first. This emphasizes the danger of opening abscesses through the rectum as some authors advocate. In about half the cases in which the abscess opens into the rectum, pus is discharged through the urethra, showing communication between these two organs, and in view of this fact, it is astonishing that we haven't more urethro-rectal fistula than we do.

Congenital malformations of this kind are very rare. When urine is passed into the rectum, it is generally expelled immediately, owing to the irritation produced by the urine.

This condition, that is urethro-rectal fistula, is nearly always accompanied by urethritis and proctitis, and often the inflammation extends back into the bladder, and sometimes to the kidney, producing pyelitis or pyelonephritis. This is more especially true in a recto-vesical fistula however.

As the treatment of urethro-rectal and of recto-vesical fistula is quite different, it is very necessary that we make a careful differentiation between the two conditions.

Urethro-rectal fistula is rarely congenital. The recto-vesical is fairly frequent. In urethro rectal fistula we have the history of urethral or prostatic disease, and in recto-vesical we have a history of peritonitis or intestinal disease. In urethro rectal fistula the contents pass only during functional action; in recto-vesical they pass without regard to functional action. In urethro-rectal, the amount passed is usually small and irregular, but in recto-vesical large and constant. In urethro-rectal, the discharge is generally from the urethra to rectum, and in recto-vesical, from the intestine into the bladder. Cystitis is not so frequent in urethro-rectal, but always present in recto-vesical. Tho opening is small in urethro-rectal, and usually low down, but large and above the finger's reach in recto-vesical. A sound can be felt through the rectum in urethro-rectal, and cannot be felt in recto-vesical. Colored fluid injected into the bladder does not appear in the rectum until micturation in urethro-rectal fistula, but does occur in the rectum in recto-vesical immediately after its injection into the bladder. In urethro-rectal fistula the deposit of cycatricial tissue is easily felt through the rectum, and cannot be felt in recto-vesical.

Urethro-rectal fistulæ due to operations, generally heal spontaneously, but in those due to pathological processes there is but little tendency to spontaneous healing, and until recently, all operative procedures failed to bring about a cure-

Treatment.—The treatment has been as variable as it has been futile. Writers have recommended methods with which they have had no experience and but little confidence. Curettage, caustics, and cauterization with catheterization and cleanliness, have all proved unsuccessful in chronic cases, but may effect a cure in the acute ones. Dr. Tuttle has operated on twelve or thirteen cases since he conceived of the plan described below, with recovery in every case. I have done the operation only once, with similar results, and with no unpleasant after-effects. The success of the operation depends upon two principles. First, the removal of all obstruction to the passage of urine or intestinal contents through the normal channels; and second, by the obliteration of the fistulous tract. So long as the stricture of the urethra remains, it is impossible to cure the fistula. Wherever there is hypertrophy of the spincter ani muscle, obstruction by tumors, strictures, or similar

conditions of the rectum, it is necessary to remove these obstructions before attempting to treat the fistula. Forcible dilatation of the sphincter will relieve the obstruction in either normal or hyperthropied spinchter, but this is only transitory and not to be depended upon in the treatment of so serious a condition. Absolute relaxation for a considerable length of time is necessary to bring about a cure of this condition, and this can be done only by severing the sphincter muscle. It is also necessary to protect the parts from abnormal passage of urine into the rectum, and fæcal matter and gas into the urethra. Permanent catheterization will accomplish the first of these; the latter can only be accomplished by preventing the bowels from acting for four or five days, or by doing an inguinal colostomy. This operation is indespensable when you have considerable rectal ulceration as a complication.

Before operating upon any form of fistula, a thorough investigation should be made as to whether it is tuberculous, as the treatment for tuberculous and non-tuberculous fistulæ are quite different. However there is a difference of opinion upon this point, and upon which our text-books have but little to say. Dr. Tuttle has sounded a warning against operating upon tuberculous fistulæ. and his book is about the only one that has anything special to say along this line. He claims that nature has thrown out a barrier between the fistulous tract and the lymphatic circulation in the form of dense fibrous tissue, which prevents the spread of the tubercular bascilli through the lymphatic circulation when uamolested, and when opened up it gives exit to this bascilli through the lymphatic circulation to other parts of the body. where they may do great damage. I am not prepared to express an opinion in regard to this idea. However, I am prepared to say that it is certainly well to know if you have to deal with a tuberculous fistula, as a tuberculous patients' resisting power should be the best that it is possible to obtain, before operating. Furthermore, it is certainly very advisable, whether Dr. Tuttle's theory be true or not, to excise a tuberculous fistula whenever possible.

There have been a number of operations devised for the closure of these fistulæ, as I said in the outset, but none of them save the one I shall describe have proved a success, and I shall not take up your time in describing them. In the operation for this trouble the chief thing to be overcome is to prevent the urine from accumulating in the pocket made by the removal of the cycatricial tissue and undergoing decomposition. Dr. Tuttle in his operation has to a great extent overcome this obstacle, which is briefly as follows: An incision is made from the scrotal juncture of the perineum into the fistulous opening in the urethra, following the flstulous tract into the rectum, severing both external and internal sphincter muscles if necessary. The cycatricial tissue around the fistulous tract is trimmed away with scissors. (This, of course, being a non-tuberculous fistula.) The intestinal wall is now dissected from its anterior attachments for three-quarters of an inch above the fistula, and one-half of an inch to each side. A flap is dissected from the soft tissue on either side of the urethra sufficiently large to replace the portion of the floor of the urethra that has been destroyed. A steel sound (about No. 30 F.) is then introduced into the bladder and the flap sutured together over it loosely. A second flap should now be taken outside of the first and entirely surrounding it, and in this way a cushion is formed closing the fistulous opening of the urethra and replacing to a certain extent the tissue removed, thus obliterating the pocket that previously had been one of the great causes of failure in this operation. The edges of the rectal wall are now sutured together through all its coats with chromacised catgut down to the external sphincter muscle (according to Dr. Tuttle, but it seems to me that it would be better to leave out the mucous membrane in suturing the rectum) at which point the mucous membrane is dissected loose for a short distance to each side and drawn together by sutures which do not involve the muscle.

The incision into the urethra below or in front of the fistulous opeding is left unsutured in order to allow the exit of any small amount of urine that might accumulate around the catheter in this region, and that drainage might be acquired through capillary attraction by the use of gauze. A number 18 F. rubber catheter is then introduced through the meatus into the bladder and fastened with adhesive straps. A large drainage tube is introduced into the rectum to facilitate the escape of gas and fæces. The perineal wound is sutured up to and covering the flaps over the fistulous opening into the urethra, and the perineal incision is loosely packed with absorbant gauze which is held in position by a T-bandage.

In this operation we can readily see that its success depends upon the obliteration of the pocket at the site of the fistula, absolute free drainage for the urine through the catheter and perineum, and the section of the sphincter muscle which places the parts at rest and prevents any obstruction to the passage of gas and faecal matter.

Ectopic Gestation.*

By H. S. Lott, M.D., Winston, N. C.

Certain conditions are distinctly surgical: that of the misplaced product of conception is one of such conditions. Just why it occurs the various theories advanced have not explained to our entire satisfaction. That it does occur, and occur frequently, is the main fact of vital interest.

Most cases of the kind are supposed to have a previous history of sterility; but that this is not invariably the rule, I will show to you directly.

The accident is most frequent in women who have never borne children; but to this preference also, there are exceptions: showing that the impregnated ovum may persue this erratic course, and implant itself upon soil beyond the uterine cavity, at all times throughout the child-bearing period of a woman's life.

The various points at which such impregnated ovum may stop, and begin its growth, may be traced from the ostium internum of each fallopian tube, throughout the extent of their lumen; or, migrating further, and leaving the tube by way of the ostium abdominale, it may drop into the peritoneal cavity; there grafting itself near the ovary, or, most likely, within the folds of the broad ligament, from which site, as its growth advances, and if the woman survive the rupture, which is sure to come, it may, at last, find its way into the retro-uterine pouch of Douglas.

Implantation, with growth of the ovum, at any of these points beyond the uterine cavity, is sure to bring disaster. Those occuring in the proximal half of the tube seldom reach the surgeon, as they are most apt to prove fatal at the time of rupture, and are either buried in obscurity or reported by the coroner.

Ruptured ectopic gestation is a clear case of bleeding from a torn artery; and, with the lights of to-day, should be recognized, and the patient saved. Would you hesitate in the presence of a stab wound of the femoral artery? Or would you cut down and tie the bleeding vessel?

The diagnosis, with the mental picture once established, should not be difficult.

In most cases there is a history of several years of sterility; then a suspicion of pregnancy, and during the early months, either with or without previous slight menstrual "show," the sudden occurrence of "intense abdominal pain," followed by "anxious countenance, acute anemia and collapse." (Price.)

Any case in doubt will be made clear upon making the incision through the abdominal wall, as the omentum will be found black, flooded with blood.

Of those occurring in the distal half of the tube, with growth and development there and elsewhere within the range of possibilities, two notable ones have come under my observation and care.

The first one was a colored woman, seen in consultation. She was about twenty-six years of age, and had been married several years without any pregnancies. Her attending physician reported that she had been suffering for several days with very severe abdominal pains, and that hypodermics of morphia had failed to give her entire relief. The patient's condition, at the time of my visit, bore out his description. I found her lying on the bed, moaning with the pain, and unable to keep in one position.

Seating myself at the bedside I watched her for a while. The woman seemed to be well nourished, and in very good physical condition. The eye was clear and bright, the tongue clean, and the lips of a healthy color. The breasts gave no distinctive evidence, and there was no enlargement of the abdomen. The pains were distinctly recurrent and paroxysmal; the woman's attitude, during the height of their intensity, suggesting an expulsive character. As the wave of pain arose the pulse would quicken, she would change her position constantly in bed and make very bitter complaint of her sufferings.

Upon making a vaginal examination, I found very little to help me. There was a normal, virgin uterus, in relatively good position. No mass could be detected on either side, and there was no marked tenderness at any given point in the vaginal vault. In passing the hand over the abdominal wall, the sensitiveness of the left side was slightly more marked; but in the generally hyperaesthetic state of the woman, this gave little guide as to any localized focus or point for attack.

The woman's menstrual periods had been fairly regular. Some pain at each time, but not excessive in degree. It was now six weeks since sho had menstruated, the flow failing to appear when last due.

Believing that such was the case, I told the attending physician that his patient had an extra-uterine pregnancy, saying that I could think of no other process in nature that would cause her to be in this condition and advised an immediate operation for her safety and relief. In sheer desperation my diagnosis was accepted, and, on the following morning the patient was placed on the table, in a negro cabin.

The abdomen was opened in the median

* Read before the recent meeting of the North Caroliua Medical Society at Greensbor.

line. Upon introducing the exploring fingers, the uterus was found and normally located. The tube and ovary of the right side were free and normal. On the left side, tracking from the fundus down, the tube and ovary were fixed to the pelvic floor; and, half-way the distance of the tube was a gestation sac about the size of a walnut. This was an expanslon of the tube, and also on the point of rupture, which occurred almost as soon as the fingers came in contact with its presenting surface. Accompanying the rcpture was the escape of a small quantity of watery fluid. Fearing hemorrhage, I at once enlarged the rupture and freed from the cavity a spongy mass entire, which proved to be a complete placenta, about the size of a silver dollar, with normal attached, or uterine, and fœtal surfaces. No fœtus was found.

Placing a silk ligature about the tube close to the fundus, and also one near its distal extremity beyond the point of expansion, I removed the portion of tube between these ligatures. Feeling that I had accomplished my object in removing the product of conception, no attempt was made at removing the ovary from its fixed position to the pelvic floor.

Inspection of the portion of tube removed confirmed the feel it had given to the fingers, that it was an expanded fallopian tube, having harbored a gestation sac, and being on the point of rupture.

Being in some doubt as to the perfect toilet of the operation, and for the sake of safety, a gauze wick was carried down to the site of removal and brought out at the lower portion of the incision. Above this point the abdomen was closed with interrupted through-and-through silk worm-gut stitches. The gauze was removed after 24 hours, from which time the granulation was rapid and healthy : all above this point uniting by first intention, and the stitches were removed on the tenth day. The patient's recovery, with immediate removal of distressing symptoms, was practically uneventful.

This case seems to me to be of interest for several reasons : for instance, the gestation sac could not have been more than six weeks advanced, and I have seen no report of a case found this early. And again, because the diagnosis was necessarily made from rational signs only, guided chiefly by the recurrent and paroaysmal character of the pains, which were exaggerated, no doubt, because of the erratic location of the gestation sac, and finally leading us to believe that it is an inherent power of the ovum. and not the peculiar structure of the uterine walls, which causes the normal, rythmic contractions of pregnancy and child-birth.

The second case was a much simpler one, in as much as the diagnosis, at the time of my visit, was comparatively easy. The patient was white and about thirty-five years of age. She had given birth to seven full-term children, and at the time of this accident there was one child two years old, just weaned.

I was asked to see her in consultation, at her home, nine miles in the country. The history given me was, that some weeks before, while in town, she had a sudden, severe pain in her stomach, followed by a fainting spell. She was given a sedative and ordered kept quiet for a while, before being taken to her home. Since this time, she had, for the most part, been confined to her bed with the frequent recurrence of fainting spells, either with or without much exertion.

Having a child at the breast, the irregularities in the menstrual flow, or even its seeming absence, had given her no solicitude, and she had not believed that she was pregnant.

At the time of my visit she looked as one who had lost much blood; the face was blanched, the pulse quick and thready, and the slightest exertion would cause a fainting spell.

Upon physical examination the abdomen was found to be somewhat full and very sensative. Entering an ample vagina, the finger detected a uterus which had rather the feel of a subinvoluted than that of a pregnant one. On either side of the cervix throughout the vaginal vault, there was a fullness, somewhat like that of a presenting bag of water although of rather more resistence, while behind the cervix bulging well down from Douglas' pouch and covered only by the retro-vaginal wall, was unmistakably the leg or arm of a fœtus, four or five months advanced.

The diagnosis of extra-uterine pregnancy being concurred in by the attending physician : the gravity of the woman's condition was explained to herself and her family, and it was decided to remove her to the Twin-City Hospital.

Being nine miles distant and a very rough road to travel, this was rather a serious matter, with a woman almost in collapse. However, with stimulants and careful driving, it was accomplished, and the patient reached the hospital in safety; when, although it was near midnight, no time was lost in preparing her for operation.

With a pair of long half-curved and sharp-pointed scissors, the vaginal vault was punctured just behind the cervix and just where could be felt the presenting part

of the foetus. Introducing two fingers of the left hand and exchanging the sharp for blunt-pointed scissors, this opening was rapidly enlarged until it reached each lateral wall. To grasp its lower extremities, and deliver the five months foetus through this opening was a very quick and a very simple matter, and one that was accompanied by an immense gush of black fluid blood and clots. The quantity of this I am afraid to estimate, but it was very large, being the accumulation of several weeks' hemorrhage. Being told that the patient had no pulse, (which was a great comfort (?) to me at this juncture) I asked that she be given some salt solution; and, working rapidlyas possible, by passing my hand well up into the cavity, which was on the right side of the uterus, I emptied it of blood clots and cleared away as much of the placental growth as seemed consistent with the safety of the structures to which it was attached.

The flow of black blood was really alarming and several times the patient was thought to be dead; but I irrigated the cavity with several gallons of hot water, and finally by using very long and rather heavy wicks and carrying them high up, I packed it pretty full of gauze, and she was taken from the table breathing occasionally and with a very feeble pulse.

For several days and several nights it was a case of anxious watching and waiting, as the thread of life had been stretched to a very small fibre indeed. Stimulants were given constantly and the cavity was irrigated once or twice in each twenty-four hours with several gallons of hot water, until at last a faint smile of hope on the faces of the faithful nurses who had given me their help, gave me hope for the patient as well.

A most interesting feature in the after care of this case, was the sympathetic involution of the uterus, as this process progressed in the neighboring structures where the gestation had occurred.

Beginning soon after the removal of the foetus at each irrigation there would be quite a free and pinkish flow, just like a normal lochia, from the mouth of the uterus. This continued for about ten days, gradually lessening in quantity, and finally bringing away shreds, like cast-off mucous membrane. During this time the entire uterus diminished much in size, and the cervix lost its full, congested appearance.

The recovery of this patient was very slow and very tedious; but after five weeks in the hospital, she returned to her home in pretty good condition. Within the eighteen months following this accident, she conceived and carried a normal pregnancy to about the seventh month, and from that time her health has been most excellent.

This case is an exception to the rule that ectopic gestation occurs either in women who have not borne children, or that its occurrence is preceded by a prolonged period of sterility.

It also seems of interest because of the unmistakable history, which, coupled with the physical examination at the time of my visit, made the diagnosis comparatively easy, and also made us feel very sure that, in spite of the fact of her condition being almost one of extreme collapse, through surgical intervention lay the only available hope for the future safety of the patient.

Removing the foetus through the vaginal vault, was not the method of my choice. But the patient was "in extremis," and this seemed really the quickest way, and the way which nature had pointed out for her relief.

Going in from above and making a clean removal of the ruptured tube, with safe ligation of all bleeding vessels, would have been a much more complete operation, lessened her dangers afterward, and very much hastened her convalescence, *if*, she could have survived the more prolonged tax of her vitality. This was the question confronting me, and while I did not favor the vaginal route, I felt that I must defend, not only a principle and a preference, but the life of my patient as well.

The Old and the New.*

By J. A. Reagan, M.D., Weaverville, N. C.

In the early days of my recollection regular physicians were scarce, and all rode on horseback. The roads were so bad in this mountain section that a buggy could not be used, besides a large part of the practice was in the night. There were no drug stores except in cities and large towns. The physician was expected to furnish all the medicine when he was called to a case. They had no stethacopes, except straight ones made of hard wood, no fever thermometers, no hypodermic syringes—the first one I bought or had seen cost me four dollars in Philadelphia—no speculums except straight ones made of glass painted black on the outside and polished bright inside, and women generally thought it awful to have to be examined with an instrument. The college course was two years. The midwife service or practice was done almost entirely by ignorant midwives, who followed the business, and prided in their success. If they found a case that they did not understand they were loth to give it up, and fre-

*Read before the recent meeting of the North Carolina Medical Society at Greensboro.

quently held on until when a physician was sent for the woman died before he arrived, or very soon after. It was a remarkable case when a physician was called in. Even when I entered practice here this was the case fifty years ago.

Now midwives are hard to find, the old ones are all dead, and the present generation have learned that work of this kind should be attended to by educated women who have studied medicine, or by regular physicians, either male or female. I will give a few cases that occurred years ago.

Mrs. G. was at her confinement, as she supposed, and a midwife was called and pronounced the case as ready to take place, began to give her teas of some kind; worked with her for three days and nights and they called in another midwife, who said labor was working, and changed the teas, and they both worked for another day and night, when her husband sent for me without consulting the good midwives. When I reached the place the older midwife had her sitting in a stout woman's lap. I asked the midwife what was wrong, she said nothing, that the child would be born in a few minutes, but she made no effort, or manifested any disposition to turn the case over to me. I said to her, they have sent for me to take this case, and I wish to examine the woman. She said: "Well, you can do so, but the child will be born in a few minutes." She got up and I took her chair, made an examination, found the woman so swollen by constant handling the parts for days and nights that the child, if labor was on her, it could not be born with safety to the woman. I had her put to bed and flannel cloths dipped in strong oak ooze applied to the parts warm. She never had a pain after I put her to bed. This was about 3 o'clock p. m. I stayed all night. The next morning the swelling was gone, the womb closed, and she felt rested. I left told her husband, if I left home any distance I would leave word where I was, so he could find me. Three days after I left I was called to a case ten miles from my office. I went by Mr. G's to let him know where he could find me, if I was needed, and found the woman up and doing her house work. She said she had not had a pain since I left. Eight days from the time I was called she, late in the night, waked her husband and told him to go for her mother, about one half mile, to stay with her till he could go for me. When he returned, with her mother, the child was born. She never called in a midwife again, is still alive, has grown children, and is in good health.

Another Case. I was called up at midnight to go three miles to a case in a great hurry. The midwife was stalled, the man said. I had my horse caught and saddled whild I put on my clothes. We started in a fair gait, and in one and a half miles we met a man, horse in a lope, hollowing hurry up, the woman will die. We urged our horses to a fast lope, and one mile further met another man, horse at full speed, who said, "For God sake hurry." Well, we did. A few hundred yards before we reached the house we met a woman, bare-headed, on foot, saying hurry, hurry. When I reached the gate I jumped off, did not take time to hitch my horse, ran in, and said to the midwife: What is the matter? She said, "The womb and all is coming." She had her hand pressing against the child's head, and her feet propped back against something. She had held the child back until they had gone for me. Well, I relieved the good midwife, took her place, and immediately the child was born. She had mistaken the amniotic sack for the womb, but she had pressed the child's head so long that it died. and the woman lost her health, although she had one or two children afterwards, but never had another midwife so far as I know.

Another case to which I was called. The wise midwife took the breach presentation for the face, and it was reasonable to suppose she made a mistake in regard to the mouth, so she injured the child rather seriously, in her manipulations. To show what a woman can stand in this mountain section of our State, I have known women to work in the field all day and have a child at night; and in one case a woman was confined at night and the next morning got up and went at least one hundred yards to a spring and brought up a bucket of water, bare-footed, when there was frost on the ground. She did her own cooking regularly on without help. No sickness followed.

I was called to a case, in an adjoining county, where there were four midwives, and one so-called doctor. One arm of the child was born out right; the next day they started a man for me. I was some eight miles from home with a sick man. The man they sent went back and they sent another after me. I reached there in the night. The doctor and the midwives were all sitting around the fire—it was in the winter—doing nothing. As soon as I could warm my hands, wash them with soap, and oil them, I put the arm back, turned the child and delivered it at once. This poor woman had lain for 24 hours in that condition. She and the child lived, but were both in a feeble condition for some time.

I was called in haste to attend a case. I

asked the man what was the difficulty. He said, "I do not know, the midwife says she does not know, but to bring you quick." My horse was saddled and I was ready to go to another case, but went with him at once. It was a four-mile ride. We rode fast. When I got there I asked the midwife what the trouble was and received the nsual answer "I don't know." As soon as I could cleanse my hands I made an examition, but could not reach the child. I supposed the child was crossways. I prepared my hand and left arm, entered the hand, and put my right hand in the front of her and found the head outside of the pelvis, down at least four inches, had drawn the abdominal muscles over the bone. I pushed the head up and into the pelvis and the child was born at once, I never saw a case of this kind before or since, and I have not been able to find one reported. I have read the English, French, German and American works on obstetrics and have failed to find a single case reported. I have had a very large obstetrical practice extending over a period of fifty years, and have tried to keep up with the advancements and improvements. Many are of great advantage while in some cases there are a fraction too much done after the birth of the child. I like everything done decently and in order. Cleanliness is of the greatest importance in all things, but especially in obstetrics. Things are now changed, and have been for a number of years. Physicians and not midwives are called to obstetrical cases. The day of ignorant midwives is a thing of the past. For this we should be thankful, for the sake of the women. Now, we seemingly have everything that a physician needs to make him what a physician should be. Education before admission to a medical college, four years before he gets his sheep-skin. Then medical examining boards in all the States, microscopes and chemical apparatus for examining doubtful cases. I am glad that while they call our State Rip Van Winkle, we were the first to institute examining boards, and the first to introdict spitting on sidewalks and in public building *Labor Omnia Vincent.*

Since this was written a case in Georgia some years ago, has been reported to me.

The Internal Secretions.

By M. Eugene Street, M.D., Glendon, N. C.

The importance and the potential possibilities of serum therapy are to-day recognized as never before in the history of medicine. The limitations which have so long controlled in the treatment of disease are being crossed, and we are finding ourselves possessed with means of more successfully combatting disease.

The object of this paper is to call attention to the serums or internal secretions of the organs of the human system, and to their importance and to the necessity of studying them if we would be qualified to extend to our patients the greatest benefit.

The advances made by the physiologists and the physiological chemists have thrown new light upon obscure subjects, and placed medical science on a more solid foundation. Some most remarkable results have been obtained within the past few years. The transformation wrought in cretinism and myxœdema by feeding on thyroids stimulated renewed interest in the investigation of the ductless glands. The discovery of a blood pressure raising principle in the suprarenals by Oliver and Schafer in 1895 indicated some important function of these organs heretofore undetermined. And when the powerful effect of a minute quantity of this substance was observed greater interest than ever was aroused, and renewed research by many competent investigators was carried on, and it was found that the suprarenals did indeed perform a most important physiological function, and also that they furnished the key to the functions of other ductless glands. It was found that the adrenal glands depended to a great extent upon the functional activity of the thyroid gland, that the thyroid glands secretion stimulated the anterior pituitary body and this by its direct connection to the adrenals through the solar plexus, the splanic nerves, and the cervico-thoracic ganglia of the sympathetic maintained the normal activity of these glands. Thus forming what Sajous terms "the adrenal system," through which cordiac action, respiration, and general cellular oxidation are maintained.

The adrenals secrete a chromogen, a colloid hyaline fluid which leaves the organs through the suprarenal veins, and is mixed with the plasma of the veinous blood in the inferior vena cava—Sajous. This adrenalized plasma has a marked affinity for oxygen, and when it reaches the pulmonary alveoli causes the absorption of oxygen from the alveolar air, and the carbonic dioxide in the blood is thus forcibly replaced by oxygen, and expelled with corresponding vigor. The red corpuscles after this operation, bathe in an oxygen laden medium and their haemoglobin becomes reconverted into oxyhaemoglobin. The red corpuscles absorb only a part of the oxygen from this oxidizing substance and the balance left in the blood plasma.

This oxidizing substance is the reagent

*Read before the recent meeting of the North Carolina Medical Society at Greensboro.

to which the oxidation processes that occur in the blood stream are due.

Absence of or decrease of function of the thyroid gland causes decreased functional activity of the suprarenals and insufficient oxidation in the body results. a state of cretinsm or myxoedema. Exaggerated function of the thyroid, either from pathological condition of the gland or form feeding thyroid extract causes greatly increased functional activity of the suprarenals, and increased oxidation results—exophthalmus.

This oxidizing substance secreted by the adrenal system not only maintains life by insuring oxidation, but when poison of any kind, mineral, vegetable, or bacterial toxines are introduced into the system the functional activity of the adrenals is increased with the result that the oxidation process is correspondingly increased, indicatidg that its secondary function is to protect the organism against disease. Thus the adrenal system simultaneously sustains life, and aims to preserve it.

In other words immunity is shown to be the result of the action of the internal secretions.

Leucocytosis with the alexins secreted by the leucocytes depends upon increased adrenal function. And the phagocytosis which is the preponderating factor of immunizing processes was found to be due to the spleno-pancreatic internal secretion—trypsin, which is the organic body that reduces toxins to inert cleavage products, and is the agency which digests bacteria in the digestive vacuoles of the phagocytic leucocyte.

The results of the investigations upon the antitoxic power of the blood and other fluids by Metchnikoff, Pfeiffer, Denys, Hankin, Von Fodor, Nutall, and others, harmonize in that they all point to the bactericidal power of the blood serum.

Ehrlichs side chain theory no longer seems necessary. His ambocepter is the oxidizing substance of the adrenals, and his complement (Metchnekoff's cytases) the spleno-pancreatic ferment: trypsin. These two in the presence of fibrinogen, a product of the neutrophyle leucocyte convert all albuminoid poisons (including toxins) and bacteria into benign products in the blood.

The extreme sensitiveness of the anterior pitiutary body, the governing centre of the adrenals, to toxins and drugs indicate the carefulness with which any internal remedy should be prescribed, and also the dangers of promiscous self-medication indulged in by the general public. Vulnerability to disease may not only be thus acquired, but the adrenal system when debilitated by injudicious stimulation to protect the system by a sufficient leucocytosis, and adequate oxidation when disease is initiated.

Those interested in this line of study—and which is of such great importance—are referred especially to Sajous' "Internal Secretions."

Relative Value of the Various Methods of Determining the Sanitary Quality of a Water Supply.*

By Ernest C. Levy, M.D., Richmond, Va., Director of Laboratory of City Water Department.

It is only within comparatively recent years that the importance of pure water has come to be fully recognized. Up to that time little more was asked of any source of supply than that it could be relied upon to furnish an abundant quantity of water pleasing in appearance and agreeable in taste.

In the dawn of the new era, when men began to realize that a water possessing the above elementary requirements might still be unwholesome and even dangerous for drinking purposes, the aid of the chemist was called in to settle the question. During this period, things were expected of the chemist which we of to-day know he is unable to accomplish. It was then common practice to send him a bottle of water, with no data as to its source or as to surrounding conditions, and expect him, as the result of his laboratory investigation, to give a final and absolute opinion.

With the advent of bacteriology, hopes were for a brief time entertained that an infallible means had been found of determining the sanitary quality of any water with unerring accuracy. The really harmful factor in a polluted water being the bacteria of disease which might be present, the detection of these, it was argued, would be the final proof of the unfitness of a given water, while in their absence a water could be considered at least not dangerous. But it was soon found that, however well established the relation between certain bacteria and the disease to which they gave rise, and however easy their identification in pure culture, yet the detection of these bacteria in water was a task never easy and usually impossible. Thus, because bacteriology stood self-confessed as unable to accomplish the supreme task demanded of it, the real possibilities of the science were either overlooked or undervalued and, for a time, indeed until quite recently, chemical methods again enjoyed the ascendency, though now decidedly shorn of the almost superstitious reverence previously accorded them.

Along about this time it began to be re-

*Read before the recent meeting of the North Carolina Medical Society at Greensboro.

cognized that the subject of water sanitation was one of sufficient importance to constitute a real specialty in itself, and so, while most chemists and bacteriologists were engaged in the futile and rather amusing attempt of claiming superiority for their respective sciences, a few, with wider vision, began to attack the problem in the true modern spirit—by work instead of words—and as a result of their labors, both directly and in the impetus thus given to the whole subject, the modern water expert came into being. The object of the present paper is to show the necessity of bringing to bear all available methods of research in arriving at a trustworthy opinion of the sanitary quality of a water supply. This can, of course, be done merely in outline in a paper of this kind.

As above suggested, the work of the water expert is not the simple matter it was formerly held to be. True, in many instances a given water is so obviously and grossly contaminated that its unfitness for drinking purposes is manifest to even the most casual observer. Such cases need not be discussed here. At the other extreme stand those woodland springs and streams (each year becoming more rare) so removed from all possibility of contamination as to be unquestionably pure. But the vast majority of all possible sources of water supply (excluding those so plainly contaminated as to be unworthy of consideration) fall in the class where prudence suggests or demands an investigation of their sanitary quality.

The opinion is still widely prevalent, not only among the general public but among members of the medical profession as well, that a chemical examination of water for sanitary purposes is much the same thing as an analysis for any other purpose such, for instance, as for the determination of the commercial value of an iron ore or the purity of a food product. Such is by no means the case. In a sanitary water analysis the analytic processes themselves are for the most part as satisfactory as in the instances above cited, but with the iron ore or the food product the interpretation is evident when once the analysis has been made, while the water analysis merely furnishes data to assist the judgment in arriving at an opinion. This is a necessary state of affairs, arising from the fact that, in a water contaminated by ordinary sewage, chemistry does not detect the presence of any substances injurious in themselves or even any substances actually characteristic of sewage, but merely gives evidence of the presence of such things as, however harmless in themselves, have been found to be associated with polluted water. Thus, were one to give to a chemist a sample of water to which had been added a few spoonfuls of moderately salted broth, the analysis would be pretty much the same, even before the broth had undergone any change, as if an even larger amount of sewage were present, yet the broth is, of course, harmless, while the sewage might contain myriads of typhoid or other disease germs.

In spite of their limitations, the importance of chemical methods must by no means be underestimated, but, except in cases of marked pollution, they can seldom be relied upon in themselves for furnishing adequate information. Their greatest field of usefulness, perhaps, is in affording a measure of the degree of pollution where this very great, rather than in giving evidence in more doubtful cases.

In one direction at least, chemistry is able to do what can be accomplished by no other means, namely, to afford evidence of the fact that a spring or well water comes from a polluted source, even when complete removal of the contained bacteria and oxidation of the organic matter originally present in the water has been accomplished. In this way it can direct attention to the possibility of future danger through interference with the soil filtration by which purification is taking place at the time of the examination.

Bacteriological methods, like the chemical, fail as a rule to show the presence of the actual things which make a water unwholesome or dangerous, but they accomplish a much nearer approach to this end. The real danger in a polluted water lies in the presence of bacteria of disease, and especially, so far as our present knowledge goes, in the presence of bacteria derived from individuals suffering with certain diseases in which the germs gain entrance to the body by the mouth and leave it, enormously increased in numbers, from the other end of the digestive tract. Bacteriological methods are able to determine, with a high degree of accuracy, the presence of organisms characteristic of sewage, and since a water supply which is shown to contain sewage must be liable at any time to contain dangerous microorganisms (in case any of the individuals contributing this regular sewage should be suffering from any of the water borne diseases) such water is very properly held to be dangerous.

Not only can bacteriological methods determine the presence of sewage contamination with greater directness than can be done by chemistry, but they can detect its presence when the dilution is so great that chemical methods fail utterly. In distinction to what has been said of the ability of chemical examination to throw light on past pollution and to predict, at times, the dan-

ger of serious conditions in the future, the revelations of bacteriology are confined strictly to conditions existing at the time of the examination.

Besides the chemical and bacteriological examinations, we are able to gain valuable information in some cases by means of the physical and direct microscopical examinations, which last affords a means of ascertaining the character of the suspended matter present, including organisms other than bacteria. These two methods, while having their own field of usefulness, are not of as great value in this special connection as those previously mentioned.

In determining the sanitary quality of a water supply, we have, in addition to the laboratory methods above mentioned, two other methods of the utmost value: (1) a study of the vital statistics of the community supplied by the water in question, and (2) a sanitary study of the watershed in the case of streams and of the more immediate environment in the case of wells and springs.

The information to be gained by studying the vital statistics is of course available only in connection with a water supply already in use. In certain instances the information secured by this means is more positive than that obtainable by any of the above methods, but this study must be conducted with the greatest care, avoiding the many pitfalls always in wait for the unwary.

Regarding the sanitary study of the watershed, it is right here that a mistake is frequently made. While it is universally acknowledged that only the chemist and bacteriologist can carry out the methods of these special sciences, it is by no means uncommon to regard the ability to draw correct deductions from a sanitary study of a watershed as independent of such special training. As a matter of fact, the ability to give their proper value to the various features present and to sum up intelligently the influence of all the factors involved comes only from long experience. Even then, cases will arise in which the water expert must draw upon his judgment rather than upon any precedent either in his own experience or that of others.

A careful investigation of all possible factors of contamination must be entered into. The relation of the volume of the stream to the amount of polluting material, the distance of the source, or sources, of pollution from the intake of the water supply, the time taken by the stream in flowing between the points in question under both normal and flood conditions are among the most important considerations where a running stream is concerned. In this connection it may be mentioned that modern scientific opinion tends more and more to the view that, in the present built-up condition of our country, very few streams indeed furnish a water entirely satisfactory from a sanitary standpoint without the adoption of some means of artificial purification. In the case of springs and wells the points to be observed are different and usually relate to the rather immediate environment, except in the case of deep (real and so called artesian) wells, the water of which may come from great distances. The geological structure of the region must always be given consideration. In a recent case of the writer's the fact that certain shallow wells were in rocks of igneous origin led to the expression of an opinion quite different from what would have been given had they been in sandy or gravelly soil.

From what has been said it must be evident that the forming of an opinion as to the sanitary quality of a given water is a thing demanding more than a mere chemical and bacteriological examination. Both of these are necessary, but in addition to this there are many other things to be done. Even so far as the analyses themselves are concerned, the real test of skill is in the ability of putting a correct interpretation on the analyses after they are made. The analytic data themselves may aptly be compared to the symptoms which enable the physician to make his diagnosis, and every member of this Society knows the skill demanded in this connection, and how, at times, some apparently trivial symptom, which one of less experience might entirely overlook, may lead the skillful diagnostician to his final judgment of the true condition.

The study of the surroundings should never be neglected. To do so would be much the same as for a physician to be contented with making his diagnosis and deciding on his line of treatment after making a laboratory examination of the urine, sputum and blood without having ever seen his patient or having even learned anything of his past history or present symptoms. At times this might be possible, but generally it is a thing few would care to attempt. Of course it is possible in many instances to have a division of labor between a skilled observer in the field and the chemist and bacteriologist in the laboratory, in the same manner as the laboratory worker and the attending physician may cooperate.

The writer wishes in concluding to urge upon the members of the medical profession the importance of becoming acquainted with the work which has been done in recent years in connection with water sanitation. While such a degree of familiarity with the subject as can be acquired by the

busy practitioner will not, of course, make him an expert in this line, it will still enable him to do an immense amount of good in calling attention intelligently to some of the more palpable transgressions against the laws of health, which are now reaping their regular harvest of illness and death.

Obstetrics, a Surgical Art.*

By H. McKee Tucker, M. D., Professor Obstetrics University of North Carolina, Clinical Professor of Gynecology, Leonard Medical College, and Visiting Obstetrician and Gynecologist to Rex Hospital and Leonard Hospital.

The practice of Obstetrics is almost entirely surgical, as it is practically a mechanical process so far as the treatment is concerned that is needed for those pathological conditions due directly to the pregnancy. For instance, the pathological conditions that may occur during the time the woman is carrying the child, viz., displacement of the pregnant uterus, fibroids and dermoidcysts (these should be mentioned on account of the rapid growth which pregnancy occasions in them), diseases of the cervix, vaginal leucorrhoea, vegetations and vagices of the vagina and vulva, pruritus, oedema of vulva, periuterine inflamation and adhesions, disease of the breast, alimentary canal, urinary and nervous systems, the heart, hemmorrhoids, abortion and extra uterine pregnancy. Practically all of these are conditions which require surgical treatment with the exception of a few of them, such as disease of the breast alimentary canal, urinary apparatus, nervous system and heart. Even of these a large number have to finally be relegated to surgical procedures in order to save the patient's life. Unfortunately in these I am sorry to say I fear medication is often continued too long before obstetrical operations are resorted to. I am sincere in making the statement that I believe many lives have been sacrificed by the doctor arguing to himself, or to his fellow consultant, that nature will take care of her and consoling himself with this nature balm and the medicine he has given her, lets her drift and drift into a condition where, when finally surgical intervention is sought, it will be too late to save his patient, whereas if it had been used in time and properly, the patient who died would often have been saved.

Doubtless many of you can recall cases when you cast your minds back, such as approaching eclampsia, and uncontrolable vomiting, which might have been saved, if you had trusted your own surgical ability and interrupted pregnancy before the fatal issue was at hand. So much for the cohditions arising from the pregnancy.

Now let us consider pathological conditions and accidents which arise during labor: unterine inertia, excessive expulsive forces of labor, deformed pelves, atresia of the cervix and vagina, hematoma, of the parturient tract, tumors of the soft and bony structures of the pelvis, gangrene of the vulva, displacements of the uterus, prolapse and elongation of the cervix, carcinoma and fibroid of the uterus and cervix, cysts of the ovary, over growth of the fetus, hydrocephalus, twins, prolapse of the umbilical cord, placenta praevia, premature detachment of a normally situated placenta, eclampsia, ruptured uterus, retention and adhesions of the placenta, faulty positions and presentations. You will at once see that practically all this long list rre distinctly surgical.

During the puerperium the conditions most frequently demanding operative measures are diseases of the breast, lacerated perinei and complications of puerperal sepsis.

The reasons for this daper are to show by the foregoing that obstetrical practice is mostly surgical, and for the purpose of calling your attention to the great importance of recognizing any of these complications early and when recognized, in order to get the best results the operation must be done properly and in order to do this, some surgical training and knowledge must be possessed by the operator and unless he has some obstetrical operative skill, he doubts his ability and puts these off all together or until it is often too late.

Consider the great number of lacerated perinei that are certainly seen in gynecological examinations and the many deplorable conditions that result secondarily from these lacerations. How do you explain so many? Is it that they are not recognized at the birth of the child or if recognized not sutured because there are some who feel their inability to sew the more extensive tears, or is it that they are recognized but the doctor often not caring for surgery, and eases his conscience by saying 'the raw surfaces will unite by coaptation?' I wish none of these were the proper explanations but alas I fear a great many lacerated perinei and their sequelae which have made invalids out of healthy women, who have trusted themselves to us during one of the most trying times in their life's history, are explained in this way. Such practice is very wrong and should appeal to the conscience of man.

Again take dystochia, which is a great large subject in itself, so much so that I shall not go into the detail of the causes

*Read before the recent meeting of the North Carolina Medical Society at Greensboro.

and their treatment, but do wish to speak briefly of a few of the most common causes, such as those cases of uterine inertia, which are slow to respond to medical stimuli or sometimes not at all, those cases where there is a disproportion between the passage and the passenger, due either to a very large child, hydrocephalus, etc., or to a contracted pelvis or to rigid and compact soft parts, and also to those cases of faulty presentations and positions. In any of these cases why is it necessary that the mortality should be as high as it is? Because most obstetrical cases being normal, doctors frequently get into the habit of not thoroughly examining their patients, presuming everything normal they wait and therefore often do not realize some of these complications until the child is dead from prolonged pressure or the mother is worn out from fatigue and in no condition for an operation and when the true state of affairs is finally realized many practitioners, having a distaste to surgery, have not acquired the surgical skill and facilities that are most necessary for the good outcome of such conditions.

A very common cause of foetal death is that the doctor either keeps waiting for the child to be born naturally and after hours it is born dead, due to prolonged pressure, or he waits until it is dead and then applies forceps. In this one way enough children have been sacrificed to have made a great army! Forcep operations are practically without danger when properly applied and of incalculable value. Yet how often are children sacrificed from their non-use! Why? Because the doctor either does not realize the indications for forceps or if he does, for some reason unexplainable he does not put them on, or doubting his ability, he keeps waiting, hoping that nature will finally cause the child to be born. It would be so easy in the majority of these cases to tell when foetal life is threatened by counting the rate of the foetal heart.

In the cases of face presentation with the chin well posterior, the mortality should be practically nothing if these conditions are diagnosed in time and this can always be done if the proper examination is made early enough.

Ruptured uterus, as a rule, is the result of improper management of labor; here again not applying forceps or instituting some operative proceedure when rupture of this organ is threatened.

The conclusions I wish to draw from this paper are, (1) that a busy general practioner, often from over-work, does not examine his patients as thoroughly as he should and in this way fails to detect those conditions which predispose to serious complications; (2) that the best results can only be obtained by these complications being recognized and treated with the best surgical precautions and skill.

Finally, if for no other reasons than the necessity of knowing how to clean your hands properly and have your patient prepared likewise, the practice of obstetrics is still a surgical proceedure; for, until the time of the recognition of the infectiousness of peurperal sepsis and the necessity of proper disinfection of the hands, probably more mothers died from puerperal sepsis than all other causes connected with child birth. Even today there are those who really do not carry out this hand disinfection and to these I know no better words to utter than those of Oliver Wendell Holmes in his paper on "The Contagiousness of Puerpal Fever":

"It is as a lesson rather than as a reproach that I call up the memory of these irreparable errors and wrongs. No tongue can tell the heart-breaking calamity they have caused; they have closed the eyes just opened upon a new world of love and happiness; they have bowed the strength of manhood into the dust; they have cast the helplessness of infancy into the stranger's arms, or bequeathed it, with less cruelty, the death of its dying parent. There is no tone deep enough for regret, and no voice loud enough for warning. The woman about to become a mother, or with her new-born infant upon her bosom, should be the object of trembling care and sympathy wherever she bears her tender burden or stretches her aching limbs. The very outcast of the streets has pity upon her sister in degradation, when the seal of promised maternity is impressed upon her, The remorseless vengeance of the laws brought down upon its victim by a machinery as sure as destiny, is arrested in its fall at a word which reveals her transient claim for mercy. The solemn prayer of the liturgy singles out her sorrows from the multiplied trials of life, to plead for her in the hour of peril. God forbid that any member of the profession to whom she trusts her life, doubly precious at that eventful period, should hazard it negligently, unadvisedly, or selfishly!"

Lord Russell once asserted when trying a case that any question could be answered affirmatively or negatively. Turning to the witness he said, "Now, answer, yes or no." Thereupon to show the fallacy of the statement the counsel for the other side asked the question, "Have you given up beating your wife?"

Quacks, Charlatans and Impostors.*

By C. E. Reitzel, M. D., Youngsville, N. C.

The history of medicine is one replete with interest, full of characters of the noblest kind and mingled with those of the basest sort. Its origin is contemporaneous with that of civilization. The labors of the most progressive and profoundest students of the science have been neutralized to some extent by vicious quacks in the pursuit of pecuniary emolument, although somewhat emphasized by the opposition of the superstitious. That impostors, charlatans and quacks have always been among us, is sadly but most abundantly proven by a perusal of our criminal court reports. That they are present among us today is confirmed by a glance at any daily newspaper.

When we stop to think that it has taken four thousand years or more for medical science to attain its present high standard and prestige, we can more easily comprehend the universality of the grossest superstition. It is a known fact, that element known better to psychologists has never been entirely obliterated, for it still reigns supreme among the heathen and even our own boasted civilized America is not wholly without it. Let us hope that this last assertion is not correct and that the idea comes from the simple fact (?) that "Americans like to be hum-bugged." Let either be true, as it may or neither, it is to be deplored we have those to deal with whose methods and intentions are questionable and should be brought to give an account.

At different epochs from time immemorial the practice of the "healing art" has gradually passed into the possession of the priests almost exclusively and has centered around the great capitols of the Orient. It was so in ancient Greece, at Alexandria, and it was so in Rome. It needs no argument to say there were no restrictions nor any requirements for the privilege, only profess a belief in a deity and to teach the precepts of some predominating sect. It is history that only to have studied at Alexandria or even to have resided there was sufficient to have entitled one to be proclaimed a physician.

The probable reason that the science drifted to the priests is that there has always been a belief among the ignorant and superstitious that disease is a chastisement from Divine source, rather than the effect of disobeying physical laws, hence their resort to prayers and expiation especially when exhorted thereto by these apostles.

Are we to be censured when we declare that there is a parallel to be found today in Christian Science, especially when we observe that they prosper only among the ignorant, superstitious or vicious!

The Emperor, Anthony, the Pious, was the first to occupy himself, with regulating the practice of medicine. He granted certain immunities, but did ask for some proof of qualification. It seems the grossest effrontery for a body of men to come before any legislature and ask for protection in the practice of any occult science—Osteopathy. The healing art had no protection for nearly three thousand years or even more save the superstition than which no greater was needed.

Now, as medicine has done, let osteopathy and Christian science prove themselves under the protection of ignorance and superstition for a reasonable time, as they are doing wonders only among that element, before they ask for protection by the State. It is a known fact that regular physicians have the privilege and have the injunction to practice anything that from their best judgment, after a careful training and study and observation, seems best and proper, whether it be medicines that Eclectics or Homeopaths are using or methods of procedure that the osteopaths and other impostors have usurped and are wanting patented for their personal benefit.

The enlightened medical profession of today makes use of all rational methods of healing, including suggestion, manipulation, massage and electricity, water-baths, (hot and cold) to give drugs or not to give drugs. Therefore, "osteopaths," "occultists," "nature-curists" and "water-curists," "osteothrapists," "somatopathists," "mechano-neural-therapists," "vitopaths," and all of similar ilk come in the class of modern quacks. As was said in a recent editorial of the New York Times, "A course in medicine and surgery is expensive, and takes a lot of time, while a varied assortment of pseudo-religious and pseudo-philosophic phrases can be learned in a few days by any man or woman with a disinclination for honest work."

Not many people, especially of the country, know that such a great per cent. of the strong recommendations and red hot testimonials secured by these quack concerns are entirely false. It is not claimed that all are bought, but upon good authority it is declared that the following is absolutely an accurate description: The medicine agent went to the office of a newspaper and conferred with the manager who sent up stairs for one of the staff members, whose work put him in close touch with

* Read before the recent meeting of the North Carolina Medical Society at Greensboro.

the city politicians. He came down. The manager said, "Mr. Jones here, wants to get some testimonials for his new medicine, I wonder if you can help him out. Mr. Jones began, the stuff ain't on the market yet, you know, and we want to start it off with a lot of good, hot testimonials. We want to get good letters from well known city officials and other prominent people. Must have a photograph in each case. We will give them ali good send-offs, and publicity never hurts a politician you know. Think you can get me some?" The manager explained to the staff member that his success meant a big advertising contract for the paper. Jones said, "Of course I'll pay you for them. Letter and photo from good aldermen ought to be worth about $5." "I don't think that's enough," said the staff man. "Well, suppose we make it $10 then for an ordinary politician; for head of departments $15; chief of police $25, and mayor $50." The staff member secured about 30 testimonials and photos from as many politicians who had never seen nor tasted a drop of this medicine. These were extensively used in various parts of the United States.

As education has advanced and become more generally diffused, communication and transportation are easily within the reach of all. The modern charlatans see their opportunity and do not fail to grasp it. His greatest friend and most bountiful benefactor are the thousands of newspapers which penetrate every nook and corner of the civilized world. Some of these papers are daily crying for temperance reform, and are at the same time doing the State and country an injury and injustice equal to that of intemperance itself, by disseminating the effulgent claims of the medical mounte-bank. By way of parenthesis might we not ask, are not the United States mails being used to facilitate a fraud upon the public?

A man was engaged to advertise a concoction for a patent medicine concern, and by comparing statistics learned that if all persons really suffering from the disease the medicine was supposed to cure, bought it, the income would not be sufficient to pay for the advertising alone, so, in his words, "I set out in my advertising to create "Hypos," and if it was not for the "Hypos" we couldn't do business. What are "Hypos"? Why, hypochondriacs I mean; people who have melancholia, the blues, feel depressed, you know, but who really have nothing the matter with them. There are thousands and thousands of them already, but my trick is to make thousands more "Hypos." How? Why by making as many people as possible who really have nothing the matter with them think that they have the same diseases which our medicines are said to cure. See? How do you do it? was asked. Condensing what he said, it was this: Advertise under such headlines as "Dangerous Symptoms"; "Do you ever have a headache"; Don't neglect a pain in the back"; "Look out, take warning"; "Nature's warning of near approach of nervous exhaustion."

In the City of New York, the danger of the quack is seen at its worst. The advertisements of the unlicensed and illegal practitioners setting up claims to superhuman power and marvellous cures are unblushingly accepted by nearly all newspapers and with their enormous circulation furnish the widest possible range for those monstrous quacks, whose sole income is founded in newspaper publicity. Let us recall to your attention, there was a man in Western North Carolina who advertised through the papers, to be selling plebian dogs, and it was learned that his dogs were not genuine, he was tried and convicted for fraudulent use of the mails. Now I believe the time has come for this State Society to retain counsel and prosecute the advertising quacks, foreign and native, for the charlatan who imposes upon the credulity of the public is more criminal than he who deals in dogs.

After careful investigation it has been found that the diplomas of deceased physicians are being used by quacks in the large cities for display in their offices. Some have even advertised offering a thousand dollars for the diploma of registered physicians who had not been dead over five years. Some of these impostors are gigantic combinations of capital who manufacture nostrums and proclaim them to the public as "God-sent blessings," when in reality they are the fruits of sin in its vilest form. These stockholders are now very wealthy and clad in purple and fine linen, are sailing somewhere in tropical waters, off the Bermudas, for instance, in their royal palace yachts, built by the monies bled from the innocent hypochondriacs of the country.

Dr. S. A. Knopf, of New York City, to whom the "International Congress to Combat Tuberculosis as a Disease of the Masses," at Berlin, awarded the international prize for the best essay, on July 31st, 1900, in a statement to the Charity Organization Society of New York, said "Let me tell you of one instance: A poor woman in the last stage of consumption came to me seeking advise. She confessed she had been treated for a few weeks by a quack concern; her means being exhausted she was made to understand that they

would not continue to treat her unless she would give them a certified testimonial that she had been thoroughly cured of her disease which had been pronounced an advanced case of consumption by prominent physicians. Not having derived any benefit, her conscience would not allow her to become a partner to such a fraudulent procedure."

Let me give you a brief sketch of part of the history of one of the modern quacks. This one, of New York City, a little bolder than some of the rest, on April 7th, 1904, wrote to Dr. J. McPherson Scott, Secretary of the Board of Medical Examiners, of the State of Maryland, asking for permission to register as a physician in that State, without being put to the trouble of appearing there in person. As evidence of his proficiency he said he held a diploma from the "Vetus Acadaemia Physiomedica," but admitted he was not licensed in any State. At 56 W. 65th street he conducted what he called the Platen Institute, of which he was the founder, president and faculty. He printed elaborate diplomas on parchment, couched in wonderful Latin, but would sell one to every applicant for five hundred dollars. Claimed to administer any form of treatment desired. His card surpasses and is beyond criticism. Listen at his effulgent claims, "Dr. C. Conrad, founder, president and medical director of Vetus Academia Physiomedica (Inc.) founder, president and director-in-chief of the Platen Institute (Inc.) Lecturer on Physiology and Psychology in the old Physio-medical College; founder of osteotherapy, demonstrator and lecturer on osteotherapy at Platen Institute, founder and president of New York Society of Osteoptherapeutic Physician; founder and editor-in-chief of the Twentieth Century Journal in Osteotherapy; vice-president of the American Association of Physicians and Surgeons. Telephone No. 2204, Columbus. By appointment only. Office, 56 W. 65th street, New York, N. Y." His letter was sent to the Medical Society of the County of New York, and after careful investigation by their counsel and secret service men, found this man to be an ex-Norwegian sailor who had never studied medicine and that none of these Institutions ever existed save in his own vivid imagination. He was tried and convicted on April 21st, 1904.

Dr. Edward Koch is a fraud of another ilk, who claimed to have diplomas on exhibition at 48 W. 22nd Street, New York City. He tried to diffuce the impression upon the public that he was associated with the renowned Professor Robert Koch, of Berlin. The so-called consumption cure, of which he was the head, had offices in Buffalo, Chicago, Boston, Pittsburg, Altoona, Philadelphia, Cincinnati, Baltimore, Washington, Rochester, St. Louis, Newark, and other large cities. This is the kind of medical stock company that is bleeding the life blood from the consumptive poor. They are not often brought to justice for they move in rotation from one office to another too quick to be easily apprehended. But this self-constituted doctor was tried and convicted in the District of Columbia.

I have been stimulated to write this article by an advertisement in the Raleigh News and Observer under the brazen caption, "What mysterious power does this man possess," and "The dead brought back to life." Of course as the quacks all admit "The secret of their success is in the way they advertise," this particular advertisement is very likely to catch its share of the unwary. Listen what brazen self laudation! What blasphemy! This culprit is proclaiming to the public that, in one night he has completely upset modern medicine, defied all known laws of nature and utterly dumb-founded scientists. This sounds like one of old gone mad with desperation. If the greatest of all the ancient medical knaves, Paracelsus, could only know of this he would turn over in his grave. I have had occasion to observe several patients or people who have become victims from this advertisement. None of whom have been cured or benefitted one iota. One worthy young married man after taking this fakirs medicine for two or three days became very much worse, stopped using the medicine and wrote to the supposed doctor for advise. In return mail came directions to take more of the medicine and continue it with the positive assurance that it would cure him. With such positive assurance he took the medicine again for a few days and became so very sick he went to bed and sent for me. I found him pulseless and almost breathless. He could not speak and was extremely cyanotic. It was three weeks before he was up and about. This man's disease is chronic of course, but it had never before kept him in bed over one day at a time. For four months after this he was incapacitated for work; he is now, after my treating him, in very fair health, not cured, however. I verily believe had he taken a little larger doses or a few more that he would have died from its effects. This patient will make affidavit to these statements. He is of unquestionable family. (These affidavits have been secured and forwarded to Counsellor of Medical Society Co. of New York.) Does it not

appear then that the newspapers are accessories to the fact of extending world wide the great and dangerously demoralizing influence, the drug habit.

The history of one fakir, who was registered, however, is very interesting and instructive. An applicant for life insurance having been rejected, the company's agent suggested the advisability of consulting H. H. Kane, who advertised in the New York Sun, to be a specialist in men's diseases. The patient was examined and check for $800 demanded. He was told that there was little hope of his living unless prompt action was taken. $2,500 was paid in all within thirty days. Then he was advised that unless he could buy radium in sufficient quantities he could not recover; nine thousand eight hundred and seventy-two dollars was obtained in this way, but not until the patient had been rendered practically unconscious five or six days by hypodermic injections. This case having been brought to the attention of the medical society of the county of New York, three months were spent in securing corroborative evidence. When this evidence was obtained and the so-called radium drops examined by Dr. Earnest J. Lederle, and shown to contain nothing but gentian, Henry H. Kane and Wm. H. Hale, his assistant, were arrested for grand larceny: on trial they pled guilty and paid back the $10,000 and $2,500 more by way of damage, making $12,500 in all. They were sentenced to four and eight months respectively, in March or April this year, and are now serving in the penitentiary.

Their sentence carried with it a revocation of their license to practice medicine. Dr. Kane's advertisement cost him in the New York Sun for twenty thousand lines, $6,800; in the Evening Sun for twenty thousand lines, $5,100.

Dr. L. R. Williams is in the same category, and pays from $5,000 to $20,000 per year for newspaper advertisement. Men and women from every State in the union have drawn out their bank accounts and gone to the large cities, the victims of the alluring advertisements of these quacks, and returned penniless.

Deaths, evidences of many crimes of the fakir Hornbook as spoken of by Burns in his inimitable satire were horrible in the extreme, but it would be a very easy matter to find duplicates over and over again in the records of actual crimes as found in the proceedings of the criminal courts of the larger cities of to-day.

That there are thousands and thousands of crimes committed, often resulting in shame, great suffering and death, by and at the instance of these unlicensed and vicious pretenders is hereby unquestionably proved.

From the very best authority comes the report that there are now twenty thousand quacks in New York City, and only six thousand regular physicians. When we reflect that the condition which obtains in the metropolitan city is only an index to that of our whole country, is it not time for the profession to rise up and expose these enemies of mankind!

It will no doubt be said of Wallace Hadley, Hathaway and Atkins of News and Observer fame and the Boston Medical Institute and all others of their ilk as Burns said of Dr. Hornbook,—

> "Thus goes he on from day to day,
> Thus does he poison, kill and slay."

If this article serves to direct the attention of any one of this society to the evils confronting our profession and thereby stimulates us to better endeavors and deeper study whereby to check and call to account these monstrous and fraudulent pseudo-medicine companies and pseudo-doctors who are continually flooding the country with their literature and selling medicines (?) which are in reality, dopes, and are demoralizing communities, leading to the establishment of the drug habit, it will have filled its mission, and I will feel abundantly repaid.

Report of a Case of Fracture-Luxation of the Spine—Operation—Results—Present Condition of Patient.

By J. R. Paddison, Oak Ridge, N. C.

Realizing how rare cases of this nature are, I decided to report the case of one of my patients who is so unfortunate as to be the victim of an accident resulting in a fracture-dislocation of the spine.

In the course of my remarks I shall endeavor to report the case in a simple manner and shall avoid going into a detailed discussion of the anatomy and physiology of the spinal cord and of nervous affections resulting from injuries to the spine. There is always a feeling of depression when we are called upon to see any patient whom we know has received a severe injury of the back, for we at once feel the gravity of the case. I think we should, as a rule, go to the bedside of a patient with a blank record, not wondering what is the matter, not making a diagnosis before we see our patient, that is should not make snap shot diagnoses, and surely this could not be truer than when we are called upon to see the victim of some spinal injury.

In regard to the case under discussion, I wish to express my sincere appreciation to Dr. J. W. Long and Dr. J. R. Williams,

*Read before the recent meeting of the North Carolina Medical Society at Greensboro.

of Greensboro for aid rendered me in this case and also for hospital charts, etc., used in obtaining data for this paper.

As all of you know fracture and dislocation of the spine are comparatively rare and with one we usually have associated the other, hence the aptly applied term of Fracture-Dislocation.

On June 22nd, 1904, I was called to see Mr. B., age 30, single, farmer by occupation. Upon reaching home of the patient I found everybody much excited, consequently could not get a very detailed account of the accident. Learned, however, that Mr. B. had been working under a reaper when some part of the machinery gave way, catching him while occupying a squatting posture. The weight of the machine, (about 800 pounds), pressed him downward and at the same time a wooden beam pressed with great violence upon his spinal column. When machine was raised Mr. B. was unable to pull himself out and said he could not use his legs. He was picked up and carried into house and laid upon a bed. When I went in to see patient, found him suffering agony with his back. On examination, found pulse accelerated, patient very anxious and alarmed and you could see mental as well as physical suffering written upon his face. By physical examination I discovered a bruised mark running from the spine of left scapula downward and slightly to the right terminating over the spinal column about the twelfth dorsal vertebra. At this point was quite a prominence, which was very painful upon pressure. Above and below this point there was no tenderness or anything abnormal in appearance. A slight blow upon the head or foot caused pain. There was complete loss of motion and sensation of the lower extremities.

I made the patient as comfortable as possible, requested him to lie upon his back and remain perfectly quiet. I left him for four hours. When I returned, the examination was carried further. I discovered there was no control over the bladder or bowels. I used catheter and relieved bladder of about 25 ounces of clear urine. Bowels had moved involuntarily. The patella tenden reflex was gone. It was evident I had marked pressure symptoms upon the spinal cord. What was this pressure due to? I thought of severe concussion from direct violence, compression from hemorrhage, and compression from a fracture-dislocation. Taking all symptoms into account, I decidedly favored a diagnosis of fracture-dislocation about the twelfth dorsal vertebra. But hoping against odds, that the symptom might be due to a hemorrhage which might possibly clear up, I put the patient upon a hard, smooth bed, gave iodide of potassium, used cold and hot applications over spine in the form of crushed ice and hot water, gave an occasionable hypodermic of morphia to relieve pain, kept bowels open, which was no easy task, and catherized patient three or four times a day. Might say here that all attempts to prevent cystitis were unsuccessful.

This course of treatment was kept up about eight days, there being no improvement. I advised calling Dr. Long in consultation.

He came out to Oak Ridge one afternoon and advised an immediate operation. For one cause or another we could not get patient to hospital for a few days. On July 12th, I carried patient to Greensboro Hospital and on the 13th the operation was performed. Here is the history as recorded in the Hospital records, July 12th, 1904: J. C. B., white, residence Oak Ridge, N. C., age 30 years, farmer, family history, negative.

Personal history, good. Has no direct bearing upon present trouble, other than showing that patient has strong constitution.

Physical Examination: Height six feet one inch; weight 160 pounds at time of injury; well nourished; color good; skin elastic and moist over upper extremities and trunk. Elastic and dry and shows lack of warmth over legs and buttocks. No edema of feet and legs. Sensation of smell, hearing and vision good.

Present Trouble: Comes to Hospital because of paralysis of both legs, caused by a reaper falling on him, fracturing spine and causing pressure on spinal cord. Has no control over sphincter ani muscles. Retention of urine, but no dribbling. Loss of sensation in legs, lower portion of rectum, scrotum and penis.

Spinal Column: Has prominence in region of last dorsal and first lumbar vertebra, with apparent depression about area of second lumbar vertebra. Over this area there is slight tenderness upon pressure, which seems deep seated.

Abdomen: Nothing abnormal upon inspection. Upon palpitation and deep pressure the abdomen has a doughy feel and does not promptly resume its normal tone.

Muscular state is fair, but shows atrophy to have taken place in the legs and they do not seem well nourished as do the muscles of upper extremities and trunk. Not able to say whether this atrophy is due to degeneration of cord.

Motor Function: Paralysis of all muscles of both legs, except biceps muscles of

left leg which seems to be tense and either active or else in a state of a spastic paralysis. Paralysis of lower rectum. Loss of patella tendon reflex. Scrotal muscles seem to retain contractile power from slight stimulation externally.

Sensation of Pain: Absent in left leg anteriority, to a point about three inches above patella, from which point get disturbed sensation of pain to a point corresponding to a level of great trochanter and symphysis, normal above this point. Sensation of pain completely lost in front, on outer and inner parts of right leg up to a point two and one-half inches below Anterior Sup. Spinous Process of Ilium. From here to a line corresponding to a line drawn from upper part of Pubes to a point about two inches above Ant. Sup. Spinous Process of Ilium we get disturbed sensation of pain. Above this, sensation of pain seems normal. Sensation absent in scrotum and penis except at base, where it is disturbed.

On posterior surface of right leg as high as the great trochanter there is loss of sensation. A space of about two inches above this point there is disturbed sensation of pain, while above this level, it seems normal.

On posterior surface of left leg up to a point corresponding to a line drawn from the tip of the coccyx to a point about two and one-half inches below great trochanter, there is a loss of sensation of pain. From a space of two and one-half inches above this line, sensation is disturbed. Above latter area sensation of pain seems normal.

Sensation of touch is lost in left leg up to about six inches above knee. From here upward to a line drawn from top of coccyx to greater trochanter, sensation of touch is disturbed. Above this point seems normal.

Sensation of touch is lost in right leg corresponding to area of loss of sense of pain.

On anterior surface of left leg sensation of touch is absent up to lower border of patella. Above is normal.

Sensation of touch in scrotum is present, but disturbed. Absent in penis, except at base where it is disturbed.

Temperature Sense: Absent, disturbed and present in areas corresponding to sense of touch.

Examination of Urine: Appearance, cloudy; color, dirty yellow; React., Alkaline; Sp. gr. 1021. Albumen negative; Sugar negative.

Microscopical: Amorphous Alkaline Phosphates, puss cells abundant; some mucus.

Patient was operated on by Dr. J. W. Long on July 13th. Patient was prepared in the usual manner, the anaesthetic being ether. The operation performed was that known as Laminectomy. An incision about eight inches long was made over the spinous process in region of injury. Muscular structures and other tissue was dissected back, until the spinous processes were clear of tissue. On examination of the now visible vertebrae, we found the spinous processes of the last dorsal and first lumbar vertebrae fractured and also dislocated backward. With bone forceps, the spinous process and adjacent parts of 11th and 12th dorsal and 1st and 2nd lumbar vertebrae were cut away, thus removing the posterior bony wall of the cord. The spinal cord was now inspected carefully, but not finding any clots or other foreign substance in cord itself, the operation was completed by closing incision except at lower part of wound in which was placed a drainage tube.

Patient reacted nicely and made a splendid recovery, never being in a critically dangerous condition. Within five or six days after the operation the hospital records showed patient to be running about normal temperature and pulse chart. The most annoying complication after operation was the persistent cystitis, and at times there was dribbling of urine. This latter symptom did not persist long, however.

Just five weeks after operation patient was removed from hospital to his home.

What were the results of the operation? This question cannot be fully answered yet, for patient seems to be improving in some respects today. But can say much immediate good was done. In the first place patient was relieved of very great suffering, and secondly, very soon after the operation we noted a great improvement in the condition of bladder and bowels.

The patient has not been catherized nor the bladder irrigated since last October.

The Present Condition of Patient: General health is good, is cheerful and can pull himself about in any shape in bed, can help himself from bed to rolling chair, etc. Appetite good, condition of skin good, the muscular atrophy in the legs is not nearly so marked, and better still the paralysis of bladder and lower rectum has disappeared the patient having perfect control of both.

The paralysis of legs still exists, but there is improvement here also as to sensasations. In left leg, all sensation is absent in foot, but sensation of touch, pain and temperature, are present but disturbed up to a point about six inches below knee. Above this point all senses seem normal.

In right leg, all sensation is lost to about four or five inches above the knee, then there is disturbed sensation up to about Pauparts Ligament, and to a corresponding line posteriarily. Above, all sensations seem normal.

Within the last two months the patient has been able to control the flexor, abductor, and abductor muscles of the thigh to some extent and is feeling very proud of himself to think he can move his leg.

As to treatment will say just a word. Have not used electricity for no better reason than the lack of proper electrical apparatus. Have given tonics, daily baths, massage for lower limbs, and an abundance of fresh air and sunshine and good hygienic surroundings.

It has been just eleven months since the injury and even this late I am entertaining a slight hope that patient will yet make greater improvement, if not recovery.

In conclusion wish to say I think operation was certainly indicated, and to a great measure successful, and have only one regret to offer, viz: that we did not operate within forty-eight hours after the injury.

Exomphalos. Report of a Successful Operation.*

By I. F. Hicks, M. D., Dunn, N. C.

Umbilical Hernia occurs in three different forms:

(1) The umbilical hernia of infants and young people due to the weakening of the umbilical cicatrix, which yields before intra-abdominal pressure. This condition rarely persists until adult life and is readily amenable to treatment.

(2) Umbilical hernia of adults, usually due to a protrusion of omentum or intestine through an opening in the linea alba either just above or below the umbilicus. This form usually requires operative treatment.

(3) Congenital umbilical hernia, or exomphalos, is an exceedingly rare condition due to the imperfect closure of the abdominal walls, as a result of which the intestine is not entirely withdrawn into the abdomen at birth, but is found in a cavity at the base of the umbilical cord, which is bulbous and enlarged. If the condition is overlooked, it may be included in the ligature with which the cord is tied causing fatal strangulation or a fecal fistula at best. If left untreated until the cord is separated, the peritoneal cavity will be laid open and septic peritonitis will ensue. The only treatment is immediate laparotomy, reduction of the intestine and closure of the umbilical opening by sutures.

Exomphalos is subdivided into different forms by some authors, the classification depending upon the degree and amount of intestine protruded.

The case reported in this paper was one among the most fatal, it being strangulated, invaginated and irreducible. The infant in the case here reported was assisted into this world by an old mid-wife, who had the good judgment, however, to tie the cord above the enlargement. Strange to say, the cord did not separate until the 12th day, leaving the knuckle of intestine unprotected. The wise old mid-wife told the parents the condition was not uncommon, that she often treated them and ordered that the tumor be covered with a vaseline cloth until it dried up.

It grew larger every day, but nature had come to the rescue of the infant by adhesions taking place between the outer layer of intestines and edge of umbilical ring thus closing in the abdominal cavity; invagination continued to take place by means of the inner coil of intestine forcing itself outward until strangulation and adhesions took place between the layers of the invaginated portion. About the 15th day two fecal fistulae were found, one at either end of the "T" shaped protrusion. Dr. S. P. J. Lee was called in on the 17th day and requested Dr. O. L. Denning and myself to assist him operate; this we did on the 18th day. Upon examination the invagination was found irreducible and strangulated from constriction at the umbilical ring, so the adhesions at this point were broken, a laparotomy performed, about six or eight inches of the ileum resected and the divided intestine fixed by interorrhaphy, simple suturing, i. e., the ends were brought together and stitched with lembert sutures; after this the mesentery was stitched where a "V" shaped portion had been removed; the intestines were replaced and the operation completed by stitching the peritoneum and closing the abdominal wall. The bowels were kept locked by opiates for six days, when the infant had a natural evacuation and since then has had an uneventful recovery.

This case is reported on account of its rare occurrence and the almost universal fatal termination.

The success attending this operation, which was done under adverse circumstances, should be an incentive to others, not to give up hope as long as life exists in the patient.

Few men or women are morally improved by suffering and illness according to the observations of Dr. S. Weir Mitchell.

* Read before the recent meeting of the North Carolina Medical Society at Greensboro;

Paper on Physical Therapeutics.

By J. C. Walton, M.D., Chase City, Va., resident physician Mecklenburg Hotel and sanitary member of Virginia Medical and American Medical Association, the Association Southern Railway Surgeons, Hon. Fellow State Medical Society and the Danville Academy of Medicine, ex-member of N. C. State Board of Examiners, etc.

In the short time at my disposal it will be impossible for me to more than call your attention briefly to this most important and popular branch of therapeutics; and this paper is more a plea for, than an exposition on the subject.

In the spring of 1902, I introduced a resolution before the North Carolina State Board of Medical Examiners urging upon medical colleges the importance of adding this branch of therapeutics to their curriculum. Unfortunately the average medical student is so imbued with the cutting mania that very little interests him outside of the operating amphitheatre. At the New York Post-Graduate Hospital I have frequently observed that there would not be standing room in the operating ampitheatre, while a master in hydrotherapy like Baruch or Morton, in electro-therapy, would hardly have a corporal's guard to hear them lecture on a practical subject that would be of utmost practical benefit to the busy doctor every day of his life. For the relief of many chronic diseases, non-surgical, the tendency is away from drugs and those distinctly surgical, the tendency is away from the knife. I will refer briefly to only a few of the most important physical agents, viz: hydrotherapy, phototherapy and electricity.

Hydrotherapy, to those interested in this important and neglected branch of therapeuticss I refer to my paper on hydrotherapy at the Hot Springs, N. C. meeting, in 1903. It is to be regretted that the charlatan and the quack has usurped this field fully, owing to the unwillingness of the profession to accord to it the recognition it so justly merits, and to apply to its application the same rules of precision and accuracy that they do to other branches of medicine; for hydrotherapy, like other medicinal agents should be used intelligently, with the greatest care and precision and minutest attention to every detail.

Water is a very flexible agent and can be used at temperature ranging from 40 to 110 deg., and as a change of 5 deg. in temperature makes a marked difference in its effect it is apparent what an enormous latitude is offered us for grading its effect on the human system. The effects of water are due chiefly to its thermic and mechanical action, and its irritating effects on the neuro-vascular-cutaneous system. In institutions equipped with a Baruch system of baths which gives the operator perfect control of the temperature, pressure, duration, etc., it is absolutely surprising what results can be obtained in the whole domain of pathology, its effects being tonic, eliminative and alterative. An ideal remedy when intelligently used, and as far ahead of drug medication as an electric light is of a tallow candle.

Phototherapy or light therapy.—This comparatively new agent has made wonderful progress in the last decade, but it is only a recent discovery that light, contains chemical, as well as heat rays; there being invisible rays at both ends of the spectrum; those beyond the red are the heat rays, while those beyond the violet are chemical rays and stimulate the development of chlorophyl in plants and hæmoglobin in the blood of animals, by increasing the oxidation processes in the cells. The composition of the spectrum of light is practically the same whether its source be the sun or an artificial one. This is very important from a therapeutic standpoint, as sunlight is not always available, and the electric light, both incandescent and arc is preferable to sunlight since it contains relatively a greater number of ultra-violet or chemical rays, especially the arc light; the incandescent being used principally for their heat-producing effect. It is a humiliating fact to admit that through all the ages that we are just awakening to the importance of light as a therapeutic agent, especially as a remedy against that scourge of the human family, tuberculosis. I have listened to innumerable discussions before this body as to the value of this or that drug in tuberculosis, according to the then prevailing fad, only to find it replaced by another equally as good, at the next annual meeting. Visiting sometime ago one of the leading and best conducted tubercular sanitariums in this country, the physician in charge—a noted specialist—tersely summed up his treatment as follows: Life in the open air with an abundance of sunshine and fresh air, plenty of good nutritious food, at least three square meals a day, the Baruch and Static baths for their demonstratively proven effects by counting the cells before and after treatment in restoring and increasing the hæmaglobin and blood cells. All other apparatus and devices has been relegated to the garret. Electric light is nearly always available. Its rays being richer in actinic power than sunlight, they are not expensive and I would suggest their use in all sanitaria for the treatment of tuberculosis and other chronic conditions. It has been demonstrated that tubercle-bacilli, plague bacilli, splenic fever

*Read before the recent meeting of the North Carolina Medical Society at Greensboro.

spores, tetanus germs, etc., are all promptly destroyed by exposure to sun or electric light; and that the removal of poisonous materials, including bacteria, is hastened by increasing the eliminations. Koch was the first to recognize the destructive influence of sunlight on bacteria, and Finsen later discovered that the ultra-violet rays destroy the tubercle bacilli in lupus of the face and that healing with but little scarring followed its use, and to him we are indebted for the foundation of phototherapy. Finsen, in 1898, treated smallpox with red light and found that patients thus treated recovered without pitting or scarring, and further demonstrated that light could be used apart from heat, the heat rays being eliminated with screens, running water, etc., and that cold light was frequently as effective a therapeutic agent as light from which the heat had not been abstracted. It was also demonstrated that light will penetrate and pass through the body, certain rays being absorbed by the tissues, the others passing through and out. The more transparent to light the upper layers of tissue the more intense are its effect on the deeper layers, and all the internal organs are accessible to the influence of light, especially to the actinic rays. The general light bath to which the whole body is exposed, the head outside, is a cabinet finished in enamel paint, with a number of 16 candle power incandescent lamp, with two or more arc lights up to 1,000 candle power. The temperature of the cabidet being regulated by increasing or diminishing the number of electric lights. The light treatment has been found beneficial in a great variety of diseases, including rheumatism, neurasthenia, chronic skin and parasitic diseases, anemia, tuberculosis, and all conditions of faulty metabolism. The arc light is used in conjunction with the X-ray treatment to prevent dermatatis and burns.

Morton claims by artificially producing fluorescence in the human organism that the effects of the X-ray are made more deep and penetrating, and its therapeutic effects are very much inhanced thereby, and frequently cures cases that failed on x-ray treatment alone. Morton's method consisted in saturating the system with a medicine endowed with the property of fluorescence or phosphorescence, and the nsubmitting the patients to the action of X-ray, or radium radiation, or of high frequency currents. The object being to develop light within the tissues. In the confidence that the well known effects of this agency might be duplicated internally and thus exert specialized effects, he well says, "that in science it seldom happens that ultimate truth is arrived at all at once."

Dr. Henry Bence Jones made the remarkable discovery that man and all animals possess in every part of their body a fluorescence substance resembling quinine, and named it animal quinoidin. Dr. Rhoads & Pepper confirmed these experiments, and advanced the original idea based on blood examinations in a number of cases, that a close connection existed between the diminution of animal quinoidin and malarial disease. They therefore gave quinine to increase the fluorescence of the tissues to its normal point. Is is well established that quinine solutions, when subjected to light, exert a deadly effect on micro organisms. Fluorescence then is the property which substances have of absorbing visible or invisible rays, and giving out visible rays. Sunlight, electric discharges, ultra-violet light, the roentgen, and becquerel rays, all excite fluorescence and phosphorescence. Morton believes that the effects of the x-ray may be due to the fluorescence of the tissues themselves. His combined treatment is the X-ray, or radium radio active water, and fluorescent fluids, and regards fluorescence as essential if one is to obtain the best results in the treatment of cancer, lupus, tuberculosis, Hodgkins disease, eczema, psoriasis, etc., to produce fluorescence administer from 5 to 15 grains of bi-sulphate of quinine daily according to Physiological tolerance.

Electricity.—The prevailing prejudice against the "therapeutic employment of electricity."

First: Arises chiefly from the indifferent attention paid to it by the Med. Colleges; Second: An attempt to use it without proper knowldge and training, and the consequent failure resulting therefrom; Third: Failure from inefficient apparatus and prejudice created by its employment by quacks. The great improvement in the quality of apparatus and the growth of the knowledge of its practical application to therapeutics during the last few years has placed the science upon a plane in medicine equal to that occupied by electricity in the arts and sciences. The science of electricity in all spheres is an exact science; its laws of action are unvarying; a method or treatment, or clinical results, once demonstrated, it is always possible to duplicate the result in a similar case. Given a correct diagnosis in a condition in which it is indicated we are never more certain of the prognosis than when applying electricity in an intelligent and technical manner. In therapeutics we must consider the two features of each electric current, the amperage or current flow and the voltage or tension of the current. Nothing is more unscientific than to speak of electricity from any source as being comparable in its action to a current from an-

other source. The common expression "I have tried electricity" to the informed physician is meaningless unless the peculiar technique and modality employed has been described. The galvanic or continuous current is usually employed as a chemical agent for minor surgical procedures, for electrolysis, to promote absorption, as in strictures and the massive method of mercuric cataphoresis of Massey as employed in the treatment of malignant tumors. Personal experience, has thoroughly convinced the writer, that more satisfactory results can be obtained from the static machine than from all other electrical sources combined. Of the various actions of these currents of higher potential, the first and most important of all is the induction of muscular and tissue contraction, or vibration, influencing the removal of local stasis and restoring circulatory drainage and the normal processes in regions where stasis exists. Second: The relief of pain and reflex irritation due to the removal of stasis and congestion. Third: The relief of muscular spasm. Fourth: An acceleration of local metabolism. The efficiency of the various electrical currents in overcoming local stasis and passive hyperemia are relative to their capacity to penetrate the tissues, with the additional quality, of the current by which it induces contraction without reference to the stimulation of motor points. In other words, the current which most effectively influences local stasis is a current of high potential, and a moderate rate of frequency applied in as close contact as possible with the tissues, which are in a state of congestion. The action then, of the current, is to produce periods of fibrillary contraction interrupted by short periods of rest, charge and discharge.

High frequency renders a current impotent to the induction in tissues of muscular contraction except of a character which is entirely imprrceptible and relatively inefficient for the purpose of relieving the grosser conditions of local stasis. For such an action an energetic force is demanded, a vis-a-tergo; a current of lower frequency, other things being equal, renders the amplitude of the discharge capable of penetrating into the deeper tissues involved in a congested process thereby overcoming the condition which acts as a bar to recovery—an induration for which nature has but feebly provided a means for removal. No measure has proven so valuable in my experience in the treatment of these conditions as the static wave current (above described) applied directly over the local conditions, followed by the brush discharge or sparks when indicated.

Snow has demonstrated that in the earliest stages of acute inflammatory affections due to local infections, such as abscesses, boils, tonsillitis, etc., that the processes will be aborted by the early application of the proper electrical modalities—the action being due not only to the removal of local stasis, but also to the induction of a more active local phagocytosis which disposes of the infectuous element thereby relieving the tissues.

I regret that lack of time prevents my reporting a number of cases of acute and chronic sciatica, chronic prostatitis, asthma, neurasthenia, insomnia, rheumatism, gout and a variety of nervous and painful conditions which were relieved by the application of the wave current, brush discharge and sparks.

Editor acknowledges his indebtedness to: Dr. Simon Baruch, Hydrotherapy, New York City; Dr. Wm. Benham Snow, Static Electricity, N. Y. City; Dr. Wm. James Morton, Lectures at Post-Graduate Hospital, N. Y. City; Dr. Margaret A. Cleaves, Lectures New York School of Therapeutics, N. Y. City.

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Treatment of Pulmonary Hemorrhage.

By F. J. Clemenger, M. D., Asheville, N. C.

The inability of the general practitioner to find any promising line of treatment laid down in text-books on the practice of medicine, or works devoted to the special subject of tuberculosis, has made the problem of what to do first, when we find our patient in the grasp of a profuse pulmonary hemorrhage, a most puzzling question.

There can be no more disconcerting scene than one in which we enter a room to find our patient, with blood streaming from mouth and nose, and an agonizing look of impending death on his face, anxiously awaiting the appearance of the physician with immediate aid which is, unfortnnately, not always in his power to give.

Even the specialist in lung diseases is, at times, in a dilemma when called to see the patient, whom but a few hours before he left in good condition, now in the grasp of a seemingly fatal hemorrhage, and well may he feel alarmed for often he becomes simply a passive spectator in a battle for life which nature must, under the ordinary methods, fight almost unassisted.

Could we but know that by means of a tourniquet or hemostat we would, as in hemorrhage from other sources, soon be able to control the bleeding vessel, we

* Read by title before the recent meeting of the North Carolina Medical Society at Greensboro.

would calmly proceed to the best management of the case. But the knowledge that in the end we can do nothing directly to stop the hemorrhage often disconcerts even the most experienced.

It is a peculiar fact that the fear of the patient is usually out of all proportion to the amount of blood lost and the physician's first best point in treatment will be to allay this apprehension which he can best do by assuming a quiet and confident manner, immediately on entering the sick room.

It is also a fact that most pulmonary hemorrhages, will be checked by nature, even if a physician was not called, but many have been fatal because the patient's mental condition was such that absolute quiet was impossible and without it lowered blood pressure could not be had.

Blood pressure within the pulmonary artery is something about which we know little, but it is definitely decided that it is considerably less than that in the aorta, though subject to a vaso-motor influence. Experiments have shown, however, that drugs having influence on the systemic pressure may have no effect whatever on the pulmonary circulation and that in some cases may cause a rise in one and fall in the other, or it may rise and fall in both at the same time.

These facts have made the use of some drugs theoretically desirable, in hemorrhage from other sources, undesirable in the treatment of this condition, the chief one we may mention is ergot, which, according to the experiments of Bradford, causes a distinct rise in the pulmonary pressure.

Morphine is the drug most commonly used by those having had greatest experience, and it is not only of value because of its effect on the pulmonary circulation, which it distinctly lowers, but is also valuable in controlling the cough which sometimes, by its persistence, is responsible for the continuance of the hemorrhage- Care should be taken that the drug is not pushed too far, as it may so deaden the reflex, inducing the cough, that in small but continued hemorrhage, a pneumonia may be set up from inspiration of the blood.

Atropine is also of considerable value in the small hemorrhages, but should be used with caution in the rupture of a larger vessel, though in capillary oozing it is even more preferable than morphine, as it can be given over a considerable length of time.

As styptics we may mention tannin, sesquichloride of iron, aromatic sulphuric acid, and lead acetate as the ones most commonly used but they seem to have practically no influence in this condition.

Aconite may be given in cases where the general blood pressure is high and is very useful to quiet a rapid and excitable heart.

Adrenalin is said by some to prove valuable through its influence on the vaso-motor system, but its action on the lesser circulation is not fully understood though, clinically, it seems to produce results in the milder cases.

Calcium-chloride is used for its effect on the coagulability of the blood, together with gelatin, but neither are productive of any great influence.

Digitalis and alcohol are both contraindicated, though used considerably, as they cause a distinct rise in the pulmonary circulation.

Very little aid can be expected from medication in hemoptysis, however, but our best help must be obtained from application of non-medicinal measures, of which the first and most important one is that of posture. Nothing is more conducive to lowering blood pressure than the recumbent posture and the patient should be placed in this position and, under no circumstances, allowed to change until the bleeding has stopped, unless it becomes so profuse as to threaten life by suffocation.

The blood should be wiped away from the mouth with a napkin by an attendant and the patient not permitted to use the arms for anything. Limitation of the respiratory movement, by placing adhesive straps around the chest is thought by some to do a great deal of good, their value is still questionable, however.

Binding of the extremities, where there has been failure to control by other means, is not to be forgotten in the more serious cases, but care should be taken to see that the arterial supply is not cut off by having the bandages too tight.

Among the valuable aids is the ice bag, placed over the praecordia, when the heart is very rapid, but it is a useless measure if placed over the lung with the idea of influencing the hemorrhage through its action on the vessels of the lesser circulation.

Infusion of salt solution in cases of very profuse hemorrhage is not to be forgotten.

The application of the surgical principle of direct pressure to stop a bleeding vessel has induced a number of men to produce an artificial atelectasis, but the results do not seem to have been satisfactory. The procedure has suggested to me a means of stopping pulmonary hemorrhage which, to my knowledge, has never been tried and theoretically not objectionable in a great many cases.

Murphy, of Chicago, has demonstrated that an artificial atelactasis can be rapidly brought about without any serious harm being done to the patient, by means of in-

troducing carbonic acid gas into the pleural cavity.

This procedure would require no special apparatus, other than that usually found in the armamentarium of the general practitioner, and might prove of particular valu- in institutions where the gas could be cone stantly on hand.

The operation was performed by introducing an aspirating needle into the pleural cavity and passing two to five hundred c.c. of the gas through a sterile filter into it. In this way pressure of measurable value can be brought about, and unless the lung is tightly bound down by adhesions, we would have no trouble in controlling a hemorrhage uncontrollable by other means.

Murphy has shown by the X-ray that a condition of complete atelactasis is produced. The gas must be withdrawn when no longer needed, care being taken to place a pad over the puncture to prevent subcutaneous emphysema.

Diet should be carefully guarded and the solid foods returned to only after active bleeding has ceased for some time.

The patient who has once had a hemorrhage should be instructed to avoid the pursuits which have a tendency to raise the bloop pressure, but on the appearance of the first sign of a beginning hemorrhage to immediately lie down and send for the nearest physician.

Malarial Hemoglobinuria, Black Water Fever, Hemorrhagic Fever, Yellow Chills.*

By O. C. Daniels, M.D., Oriental, N. C.

Definition.—An infectious non-contagious disease, caused by the malarial plasmodium, characterized by an enlarged spleen melanemia, jaundice, accelerated pulse, and a tendency to prostration and nervous symptoms, the following varieties will be described: Intermittent, Remittent and Pernicious.

Etiology.—Authorities have not yet agreed as to the kind or kinds of malariam parasite present in this disease.

I believe the parasite of the disease differs in no way from the parasite of the ordinary forms of malaria, viz., intermittent and remittent. I believe impure water, through its action on the stomach and liver associated with malaria germs, play quite a causitive factor; in other words, anything that decreases or stops the function of the liver. Quinine given by mouth by some is called causative factor. No doubt quinine given to a patient, in which there are malaria germs and with a liver that is scarcely acting will produce this disease. But you can give all the quinine you wish if the liver is acting and not produce hemoglobinuria.

Pathology.—Spleen is enlarged, some times tender, but differing in no way from the ordinary forms of malaria. The blood on microscopical examination contained many parasites, hemoglobin crystals, broken down blood cells, with a reduction of red blood cells.

Hemoglobinuria occurs when there is such extensive disintegration of red cells that the liver is unable to transform the whole of the liberated hemoglobin into bilirubin. The liver is swollen, sometimes tender. Jaundiced over the body. The urine contains very much hemoglobin and bile. And if the tubules of the kidney are lacerated by the hemoglobin passing through the kidney there will be red cells present and some albumin, with acute nephritis.

Symptoms.—Pernicious variety. This variety is usually very abrupt with severe chills, headache, nausea and vomiting, high fever, backache, restlessness, very quick pulse 120-160 jaundice very marked, peculiar odor. Hemoglobin in the urine and frequently total suppression. The patient from the beginning gets worse, becoming markedly prostrated or comatose, perishing in the first eighteen hours.

Remittent Variety.—Patient usually giving history of having had chills the previous day or days or having been in ill health.

The attack is ushered in by chill which is distinct, nausea and vomiting which is usually very marked, vomiting principally bile and the vomiting ceasing as soon as the bile is freed from the stomach and bowels begin to act; usually constipated. Fever 103-105 with distinct remission, headache, backache, and sometimes delirium. Pulse very quick and out of proportion to the fever, accelerated breathing. Some patients complain of shortness of breath. Jaundiced and with very anxious look. May also be very nervous, rolling from one side of the bed to the other. Spleen and liver enlarged and sometimes tender. Urine full of hemoglobin. In this variety there is no regularity of the chills, may have one, two, or three in twenty-four hours. Hemoglobin usually disappears from the urine in twenty-four to forty-eight hours, if the patient does not have second chill. But hemoglobin will appear in the urine twenty-four to forty-eight hours after they have last chill; in other words, each chill setting free hemoglobin.

Intermittent Variety—Patient giving history of having had chills previous days or weeks. Begins with a chill which is frequently very slight, frequently not even

*Read before the recent meeting of the North Carolina Medical Society at Greensboro.

going to bed. Fever to 102-104, some nausea and vomiting, headache, quick pulse and continues so. Fever is soon followed by a sweat and consequent a drop of the fever. Slightly jaundiced. Spleen and liver enlarged. Urine contains hemoglobin and bile. The hemoglobin usually disappears before the next chill, jaundice clears up considerable. All the symptoms will gradually disappear unless have a chill the second day which will cause a repetition of the first day with increase of severity.

Complications.—Gastritis, enteritis and nephritis.

Diagnosis.—The diagnosis is very easy to anyone who has seen a case. The laity in our malarial district, I believe, can diagnose ninety per cent. of the cases. And a physician who has ever seen a case should never make a mistake. The diagnostic symptoms are: chill, jaundice, accelerated pulse, and hemoglobin in the urine. These symptoms in a malarial district will never fail.

Prognosis.—The information I can get about this disease in the past lead me to believe that it was much more fatal formerly than now. The pernicious variety I have never seen, but would regard it as very fatal. The other two varieties I do not regard as being very fatal. If a physician is summoned just after the first chill and does nothing except treat the symptoms and condition of the patient he will save about 75 per cent. under the treatment which I will tell you presently. I believe there should not be a mortality of more than 10%.

Sequela.—Chronic interstitial nephritis being the most important, due to the hemoglobin crystals cutting the tubules of the kidney. Chronic endocarditis due to hemoglobin. Cirrhosis of the liver which may be caused by repeated attacks. Gastritis and enteritis which frequently give considerable trouble.

Treatment.—This to me apart from the diagnosis is the most important part of the subject. First stop the progress of the disease, and second put all the excretory organs to work throwing off all toxic material. To accomplish this, first I give hypodermically 5-10 grs. of quinine. As to giving quinine there are quite different views. One giving quinine by mouth, another giving it hypodermically, and another says he does equally as well or better without giving any quinine. When I first began treating this disease I could not find any authenticated plan or treatment—so I began experimenting with quinine hypodermically. My first patient recovered and I have treated ten of my own cases since, all of which recovered and I attribute it to the quinine given hypodermically, keeping off the second chill. In treating my first case the hemoglobin disappeared in the urine in 48 hours. And after the urine had been clear about five days I tried quinine by mouth, three grains every four hours with a return of the fever from 99.6-103, with the appearance of hemoglobin in the urine which lasted about 18 hours. I at once stopped the quinine, gave a purgative, the fever immediately going down to 99.6. I then gave for three days 12 grs. of quinine hypodermically and it did not cause any hemoglobin to appear in the urine. My explanation to the difference in the action of quinine by mouth and hypodermically is this. As I have told you before the liver is functionating very improperly, and quinine given by mouth goes direct to the liver, causes the liver to functionate even more improperly. The last case of hemoglobinuria I treated was of the intermittent variety, and the mother had given the boy, who was eleven years old, 6 grains of calomel, so I gave the boy a dose of magnesium sulphate, and the two got the boy's liver to acting very nicely. I decided I would give him 1½ to 2 grains of quinine in an acid pepsin solution every three hours by mouth. The quinine acted very nicely in this case because his liver was acting properly. If I always knew my patient's liver was acting properly I would not hesitate to give quinine by mouth. But in 90% of the cases we are not able to get the liver to acting properly before another chill has come on, these are the cases that quinine hypodermically will cure. In giving quinine hypodermically I usually give 5-10 grains every six hours so as to get in 20-24 grains before the next expected paroxysm. Then I reduce the quinine and give 12-16 grains per day until the evening temperature is down to 100. I have also used inunction of quinine, also quinine and whiskey rubed into the skin, both with good results. I have also used methylene blue, but it seemed to me my patient did better without it than with it, so I have discarded it altogether. Salicin I have used and do use some now. It is a stomacic tonic and diaphoretic and may have some anti-malarial properties, at least it will do no harm. Some physicians give spirits of turpentine, for its effect on the liver and kidney. I have used it but am unable to say whether it does any good or not.

As to the second indication, get all the excretory organs to the utmost capacity. Give sodium phosphate, epsom, or rochelle salts, to open the bowels, and deplete the whole portal system. Then give calomel, one grain every hour for five doses, then in about six hours give another dose of one of the above salts. The salts should be re-

peated once or twice a day as indicated by the condition of the bowels and liver. Calomel can also be repeated, as thought best by the physician.

To keep the kidneys acting I give acetate of potash, 10 grains. Infusion of digitalis three drams, spirits of nitrate one dram, every three hours. If the patient vomits so much that he cannot retain enough water, give high enemas of normal saline solution. And in extreme cases hypodermoclysis or venous ejection of normal saline. Hot applications in the way of turpentine stupes over the region of the kidneys will do good.

The skin must keep acting by giving tepid baths, followed by hot dry packs, if necessary. When there is pronounced jaundice hot pack will relieve that quicker than anything else.

Diet should not be considered the first two days only in exceptional circumstances. I prefer animal broths strained, peptonoids, oysters and crackers, milk and lime water after the vomiting has ceased.

During convalescence the diet should be gradually increased, put on a tonic containing strychnine, arsenic, iron, quinine, nitromuriatic acid and pepsin; give plenty of regular sleep, nutritious diet. See that the liver does not become inactive and there will be no more hemoglobinuria.

Olive Oil Injections for Constipation.

Einhorn (The Medical Times) considers this measure not only palliative but often curative. It is most valuable in obstinate cases, especially when due to spasmodic contraction of the bowels, (Hershell, Lancet) The author says that methodical oil injections are also most useful in membranous colitis, relieving the constipation and reducing the amount of mucus. Two things are essential to success: the case must be suitable; and the injections must be properly given. This method is not applicable as a routine procedure. It will not produce cure in cases depending upon improper food, or hard drinking water, or pyloric stenosis or gastric myasthenia. Olive oil injections are applicable to cases depending upon chronic colitis; constipation associated with spasm of the bowel, such as is frequently found in neurasthenia; and to secure a daily action in atony of the intestines while the affection is being treated by electrical methods. In these last cases the first fortnight is trying to both physician and patient; for all purgatives have been abandoned, and the treatment has not yet had time to restore sufficient tone for natural daily movements. The method of injection: from three to ten ounces are introduced into the rectum at bedtime; usually there is an evacuation after breakfast the following morning. If the oil is introduced slowly, at a low pressure, by gravitation, it will not produce an immediate stool and the patient should easily retain it. Hershell condemns the Higginson syringe. When the physician or nurse cannot give the injection, the patient may use Hershell's simple apparatus—a glass funnel of a large capacity relative to its height, provided with a metal loop, by which it can be suspended at a convenient height above the patient's bed. Twenty-seven inches of rubber tube of large calibre terminate in a self-retaining, aluminum nozzle of special construction. This nozzle has a large bore to allow the ready passages of the oil (which invariably clogs the ordinary enema apparatus), and has the end of the bore well rounded so that even when unskillfully used it cannot damage the rectal mucous membranes. The outflow of oil is controlled by a spring clip, which, when opened, will remain so until a catch has been released. The patient heats the measured quantity of oil by standing the beaker containing it in a basin of hot water; it is emptied into the funnel, the clip being closed, hung on a nail; the patient lies directly under it, a pillow beneath his hips, introduces the nozzle, presses the clip and waits until the funnel is empty. A pad of wool had best be applied to the perineum to absorb any oil which may not be retained; after a few times this is superfluous. Five or six ounces should be used at first, and the daily amount reduced until the smallest which will produce a movement is found; and this can be given nightly for two or three weeks.

A bicycle company recently received a letter of complaint from a French Canadian in which he said:

"I receev de bicykel witch I buy from you alrite but for why you don't send me no saddle. Wat is de use of de bicykel when she dont have no saddel? I am loose to me my kustomer sure ting by no having de saddel and dat's not very pleasure for me. Is not my moneys so good like annoder mans? You loose to me my trade an I am veree anger for dat. I send to you back at wunce your bicykel tomorro for shure bekawse you are such a foolishness peeples.

J. B. St. Denis.

P. S. Since I rite dis letter I find de saddel in de box. Excuse to me."

Canadian physicians are puzzling over the case of a Mrs. Day who recently enlivened her home with twins, one white and the other black. The happy parents console themselves by repeating the old saying:

"You never can tell what a day will bring forth."

Charlotte Medical Journal

EDWARD C. REGISTER, M. D., Editor.

No. 36 South Tryon Street, - - - -

- - - - - - - - - - - Charlotte, N. C.

THE UNNECESSARY EVIL.

The human kind is the lawful and legitimate heir to a great many ills and would be wrong, doubtless, to try to break the will, but there are some ailments that are deliberately acquired. Typhoid fever carries off every year a fearful toll for the careless and busy people who drink whatever is handy so long as it is ice-cold. In every case of fever the physician should ask at his first visit, "What water have you been drinking for the past three weeks?" If he can locate the exact supply for that length of time, he has located the disease and his work is not done until he has shut up the source of infection. The physician's duty is not only to the patient but to those around him and the community in general. It is not enough to treat the man who is sick but we must look after those who may contract the disease from the patient or from the original source, the drinking water.

Most of us are careful enough about the patient but all of us perhaps neglect to trace to its source the germ laden water and have it shut off. The best way to kill a thing is to hit it in the head and if the lick is strong enough the job is done. So in typhoid the way to stop it is to plug up the water supply. Of course this will take time and money and trouble, and we are such busy folks that we would perhaps rather bury a few of our friends and relatives than to worry with it. But if human life is worth anything at all we should stop the tax of death and suffering that is paid out every year. Every typhoid case should be considered a dangerous focus of infection and every possible means should be used to keep it from spreading. The mosquito has been dropped from the list of necessary evils and the ordinary house-fly should be outlawed. A great many more people die in the trail of the fly than from the rattlesnake. These household carriers of the most deadly germs crawl over our bread and butter, swim around in the milk and track over the baby's face and otherwise insinuate themselves into all the unguarded places of our every-day life. The result is that we have typhoid in the city, in the town, in the country. One typhoid fever case, one careless disposition of the excreta, and one handful of flies will equal an infected community and a score of death. The contagion of small-pox is not half so dangerous as the infection of typhoid for we are afraid of the contagion and fight it tooth and toe-nail and stamp it out but the infection we theorize about and leave off the fighting. We lost nearly four thousand men in the Spanish war from carelessness and flies and several people wrote papers about it, but the flies and the carelessness go on just the same. It is a pity to loose four thousand strong men in the prime of life, but to loose them to no purpose is more pity. It lies with the profession to do some great good work along this line. Talk to your people about it.

The drinking water, the patient and the fly and the greatest of these is the fly.

We must have the water; let us see that it is pure, we may have the patient, let us see that he is clean, but the fly must go.

THE HEART IN PNEUMONIA.

In all cases of pneumonia the consolidation necessitates more or less obstruction to the flow of blood through the lung tissue and this in turn requires more work for the right ventricle which is the weaker muscular structure of the two. During the chill the pulse is small, but during the succeeding fever it is full and bounding. In strong and healthy patients the pulse shows no signs of failing, but in extensive consolidation the pulse is small owing to the decreased amount of blood returned from the lung to the left ventricle. In the old and feeble the pulse may be small and rapid from the onset. The pulse in pneumonia is often very deceptive for it may be full and soft even in extensive consolidations and is therefore no value whatever in the prognosis.

The most reliable method of obtaining satisfactory evidence as to the condition of the heart itself in these cases is a thorough physical examination and by inspection, palpation, percussion and auscultation. The pulmonary second sound is most important of all to take into consideration. So long as the pulmonary second sound is accentuated then one may feel certain that the ventricle is keeping pace with the obstruction in the lung tissue. As soon as this resistance becomes too great and the right heart becomes distended and engorged with blood the ventricle will not completely empty itself, and then the pulmonary second sound will gradually become less distinct. At the same time by careful percussion one will find the right border of the heart's dullness extending a little beyond the right margin of the sternum.

It is when these signs present themselves that heart stimulants are necessary to whip up the residual forces and thus try and carry the patient over this crisis. When this comes on gradually with all the signs of dilitation, viz: (increased dullness to right of sternum lessened pulmonary second sound) the long pauses in the normal heart

cycle is greatly shortened, both sounds of the heart become similar especially in tone and therefore have the characteristics of the fœtal heart sounds.

Therefore from the foregoing one might conclude by saying that it seems most essential in severe cases of pneumonia that a daily thorough physical examination of the heart is necessary and that one is not justified in laying too much stress on the condition of the pulse alone.

CLINICAL DIAGNOSIS OF LUPUS.

In making a diagnosis of this disease besides differentiating erythematous lupus from lupus vulgaris one must constantly keep in mind epithelioma, psoriasis, scrofuloderma and syphilis. In a typical case of lupus vulgaris have the apple jelly nodules imbedded in the skin or raised above it. There is usually accompanying these nodules one or more inflammatory looking infiltrations more or less raised above the surface, moderately scaly with a well defined edge with more or less scarring due to the breaking down of older set of nodules. By using a piece of glass and pressing on the suspected nodules with it one gets the typical apple jelly appearance of its contents. This is usually found in young subjects or at least not considered a disease of elderly people.

Lupus erythematosis is distinguished from lupus vulgaris by the more superficial and less raised character of the eruption and the absence of ulceration nodules or papules near the patch. It nearly always begins much later than vulgaris and is often symmetrical. It progresses more rapidly and sebaceous glands are often involved which is not so in vulgaris. The scales in lupus erythematosis are often aid to diagnosis. These scales have a cone-shaped projection on the under surface which is not found in any of the other scales of skin diseases.

In epithelioma the age of the patient is usually the first consideration for this, a disease of the people well advanced in years. The ulceration, the history of its slow development accompanied with more or less pain, and its limitation to small area with the marked induration of its borders all go to make up a typical case of epithelioma. The question of rodent ulcers is generally decided by its location about the orbit and its very slow but progressive development.

A syphilitic gumma may ulcerate and leave some of the characteristics of a lupus vulgaris. This ulceration of syphilitic gumma is much more rapid, the absence of typical nodules and the other signs of syphilis generally clear up the diagnosis. If the case be doubtful large doses of potassium iodide will soon decide the matter.

Caseous glands or scrofuloderma soften, break down and ulcerate, leaving sinuses with soft, red undermined skin, but no translucent brownish tubercules in or near the infiltration; these together with the so-called strumous diathesis point to scrofuloderma rather than lupus vulgaris.

The typical scales of psoriasis called the silvery scale and the presence of the disease on the elbows knees and exterior surfaces make this differentiation rather easy.

Lupus sometimes resembles squamous eczema. The length of time that the lupus has existed in a very limited area, its sharply defined and raised border, the great amount of infiltration of the skin, it having been dry throughout its course while it has not varied in intensity to a notable extent, and its tendency to scar formation are all points in which it contrasts with an eczema patch.

TREATMENT OF CHRONIC BONE CAVITIES WITH IODIDE.

Chronic bone cavities unlike cavities elsewhere have rigid and unyielding walls in which blood and secretions collect and stagnate and serve as a nidus for bactericidal growth. In the majority of cases of cavity in the long bones heal by a slow and tedious process of granulation, many operations and months of treatment are sometimes required before these cavities heal. If the dressings are changed often these cavities may be kept relatively aseptic and thus favor healthy granulation. Many things have been tried with more or less success to fill these cavities, pieces of bone or bone chips, muscle or fat, etc., have been used, but not with any degree of success.

Shede recommended the moist blood clot but this way was finally abandoned. The skin flap method of Neuber has occasionally yielded good results but in most of these cases there is not sufficient for a proper skin flap. Bone derived from animals prepared in different ways failed.

Foreign substances such as glass, ivory, rubber, cork, lead, sponge, celluloid, plaster of paris, gold foil, copper, amalgam, gelatin, etc., but were in no way completely satisfactory. These materials generally acting as foreign bodies causing increased secretions and suppuration and were finally extended or removed.

The method of Mosetig-Moorhof of Vienna, which he has used for the past three years with good results is described as follows: The limb is prepared in the usual manner, and rendered bloodless by an esmarch bandage. The bone is exposed, the periosteum turned back and all diseased bone re-covered with chisen and spoon until cavities' walls are formed of healthy bone.

The cavity is then thoroughly washed out with sterile salt solution and its walls rubbed with sponges wet with 2% formaline solution. The blood is next stopped by hot irrigation the insufflation of sterilized hot air and tight packing with gauze. The soft parts are now carefully examined and all diseased skin sinuses, etc., excised until the wound in the soft part is formed by healthy tissue. As soon as the bleeding from the bone has entirely ceased the filling is introduced. The filling consists of a mixture of 60 parts of iodoform, 40 parts of spermaceti and 40 parts of sesame oil. The mixture is prepared by heating the spermaceti and the oil of sesame over a water bath for half hour, then adding iodoform to it preserving the mixture in a sterilized bottle. When the filling is to be introduced the mixture is melted by immersing the bottle in hot water and while still fluid is poured into the cavity until it is entirely filled. In a few minutes it solidifies. The periosteum, or if this is impossible, the soft parts are closed over it, the skin wound closed with or without drainage and dry compress applied. The Esmarch bandage is then removed. The wound is dressed after 7 to 10 days and in majority of cases will be found to have healed by primary union. If the wound has been drained, which is considered advisable in most cases, the sinus left will heal in the course of a few weeks. In a certain number of cases the wax mixture is slowly extended in the course of several weeks by active growth of new tissue around it and the mixture seems to act as a powerful stimulus to this growth. Iodoform poisoning was never seen in spite of the large percentage contained in the mixture as the iodoform is very slowly absorbed from the mixture only traces of iodine were occasionally found in the urine two or three days after the operation.

Masetig-Moorhof recommends this method for all forms of bone disease inclusive of the tuberculous variety and also to chronic tuberculous affections of the joints but not for acute bone disease in which the cavity cannot be rendered aseptic.

Dr. Charles A. Elsberg of Mount Sinai Hospital, New York, has used this method on a number of cases and believes it is far superior to any other method so far recommended, although his results have not been on the whole as satisfactory as those of Masetig-Moorhof.

If this method proves successful it will certainly save, with the patients and surgeons time, also the secondary operations which so often follow in the cases even in the most skillful hands.

Dr. Elsberg reduced his percentage of iodoform to 20% for one of his first cases developed iodoform poisoning when using the full amount as recommended by Masetig-Moorhof.

The iodoform emulsion has long been used in the tubercular cases with fairly satisfactory results. With this in view there is every reason to believe that this method will eventually prove highly satisfactory.

The points in favor of the above method seem to be the complete obliteration of the cavity, thus avoiding a dead space which acts as reservoir for the secretions and perfect medium for the development of bacteria, the iodoform present acting as an antiseptic tends to render inert all bacteria which may be present. So that the main obstacles are overcome by this method of treating these most troublesome cases.

A UNIQUE BOARD OF HEALTH ORDINANCE.

The following ordinance was passed recently by the board of health of Minneapolis, Minn., viz: Every person who shall treat, attend, or visit, for the purpose of treating with or without physical agencies any other person who is sick or affected with any contagious or infectious disease, such as Asiatic cholera, whooping cough, yellow fever, smallpox, scarlet fever, measles, tuberculosis, diphtheria, membranous croup, typhus or typhoid fever, within said city, there being no regularly licensed physician in attendance, or visit as aforesaid report in writing to the Department of Health of said city the existence of such disease, the date of its appearance, and the name and address of the person afflicted therewith, and every person who shall so treat, attend, or visit, as aforesaid, any other person who is sick with any such disease shall be presumed to have and possess such knowledge of the characteristic symptoms of said contagious and infectious disease as is commonly possessed by physicians regularly licensed to the practice of medicine under the laws of the State of Minnesota.

The city of Minneapolis now has in its jurisdiction a number of representatives of the various kinds of faith-healers, Eddyites, chiropractics, osteopaths, etc. Any one on reading this over carefully cannot but be impressed with the simplicity and practicability of this law. Even the people can readily see that it is to their interest that any one who pretends to treat disease must either treat these infectious ones or must refer them to those who can. This cannot be considered unjust to any concerned, but simply demands the proper knowledge of such diseases which is absolutely essential and by reporting these cases the welfare of the public is maintained. The quack not

having the required knowledge should be fined and punished for his ignorance and crimes against the public. This is a law, therefore, that should be adopted and enforced in every city and town in the United States.

MILK INSPECTION.

The proper inspection of the milk supply, especially of the larger towns and cities, would no doubt save thousands of lives during the summer months. This does not mean the simple chemical and bacteriological examination, but also the inspection of the dairies from whence the milk is derived.

The practical and up-to date farmer can soon be taught how to care for his cows, how to milk a cow and allow the least possible contamination in the milk and how to keep the milk until it is delivered. By following out these rules he can obtain a much better price for the milk, for this is the milk that is demanded by the bottle-fed infant, and if properly diluted and prepared according to the age of the child makes the best substitute for mother's milk. In some cities they have milk depots where the different constituents of the milk are put together in definite proportions according to the orders of the attending physician. Although this theoretically is ideal practically it has not been as successful as the ordinary top milk obtained from the dairies where strict cleanliness has been inforced. The details of observing strict cleanliness are carried out in the following manner : the stables are washed out twice a day, the cows are kept clean, the udder is washed before milking, the attendants are dressed in clean white suits, the hands are cleaned and all means are used to keep the dust from the milk. The milk is put into a can, then packed in ice or surrounded by cold water and kept till ready to be delivered. By this means a milk is obtained that contains no pathological bacteria and the fewest possible saprophytes. A sample from each dairy is examined daily bacteriologically and chemically in this way any irregularities on the part of the farmer or his attendants can readily be traced.

This work can only be established by the perseverance of the medical profession. This system of milk inspection once installed so that this milk could be obtained everywhere the question of infant feeding would be almost solved and then would result an important betterment of the large infant mortality.

Careful examination of ancient mummies reveals the fact that people in the earliest times suffered from appendicitis.

Review of Southern Medical Literature.

Virginia Medical Semi-Monthly, June 9, 1905

Some Remarks Upon the Use of the Uterine Curette.—Dr. J. Wesley Bover considers the three styles of instrument, viz : the dull, the sharp, and the serrated, the last may be either dull or sharp. These are not to be employed indiscriminately. The dull variety is to be used for removal of threads of tissue after abortion or miscarriage. Even after full-term labor the use of this instrument becomes necessary at times for practically the same indications. The sharp serrated instrument is employed in the removal of interuterine growth. The plain sharp curette is the one most frequently employed as the indication for its application are more varied and commoner. In all forms of endometritis not associated with malignant disease of the uterus that does not spring from the mucosa, carcinoma of the body, pediculated submucus fibroids, mucus polypi, subinvolution, metritis and chronic passive uterine congestion the sharp plain instrument may be employed. In suspected carcinoma of either the cervix or body curettage is done for the purpose of securing tissue for microscopical examination. In such work there is danger of allowing too much time to intervene between the currettage and the radical operation should a microscopical diagnosis of cancer be made. The absorbents are stimulated by currettage and the disease may be carried quickly to unremovable structures, even when unsuspected. Pryor and others have stated that not more than 10 days should elapse. The author believes that he has seen this take place in three days. In advanced cancer of this organ thorough currettage and cauterization is the classical treatment. In endometritis very often the accompanying uterine retrodisplacement that creates an interuterine reservior is the principle condition requiring rectification. The dull serrated curette is applicable to practically all the conditions for which the plain dull currette is used and is by some considered preferable. These are practically all the conditions in which uterine curretage is applicable. These might be termed the legitimate uses of the curette.

The article concludes by advising against the use of the curette in endometritis accompanying the large uterine fibroids that encroach upon the uterine cavity on account of the impossibility of reaching the pockets and pouches above the growths and in which the endometritis is most intense ; also points out the danger of infection and the danger of hemorrhage in such cases. If these fibroid tumors have begun to undergo a

malignant degeneration the curettage only opens up new channels for infection. The sharp curette is contraindicated in puerperal infection. As many cases develop pelvic peritonitis after such procedure.

Principles of Surgery.—By Stuart McGuire. Lecture IV. Resistance offered by system to action of bacteria, Methods of Study, Microscope, Test Tube, Inoculation, Isolation of Various Bacteria, Koch's Law, Agglutenation Test, Predisposition and Immunity to Disease, Metschnikoff's Phagocytic Theory, Erhlich's Side-Chain Theory.

Gaillard's Southern Medicine, June, 1905.

The Crusade Against Tuberculosis.—By Chas. A. Julian, Thomasville, N. C.

When to Operate in Pelvic Inflammation.—Dr. Chas. R. Robins says the first general rule is that a radical operation is never indicated in the acute febrile stage of pelvic inflammation. The reasons for this are that while such a condition is always a grave one, that under proper medical and local treatment the mortality even in the gravest cases is surprisingly small, on the other hand the mortality from abdominal operations under such conditions is alarmingly high, and for statistics one is referred to reports of the leading hospitals of the country. The second general rule is that when pus forms it should be evacuated preferably by the vaginal route. In some cases it may be necessary to evacuate by an inguinal incision which can be made practically extraparitoneally. As a result of this operation, which is usually done with great safety, the patient is relieved of the pus, regains her strength and is then in good condition for any further work that may be required. Treatment along these lines will secure the following favorable results:

The mortality from this malady will be materially reduced.

A certain percentage will make a more or less perfect symptomatic recovery and few a functional one without any operation whatever the exudate and new cell production undergoing resolution. The resulting adhesions may or may not be the cause of future pain and discomfort—only time can tell. When there is an accumulation of pus its evacuation with subsequent careful management of the case may secure the same favorable termination without resorting to further operation. When, however, after a period of several months during which the patient has been kept on appropriate treatment persistence of pelvic pain and discomfort causing a condition of invalidism whatever abdominal work may be required to effect a cure may be undertaken. The work can then be done under the most favorable conditions because the inflammation will have passed into a sterile stage so that the work may be done safely and better; yet, it will be possible to practice conservative surgery in very many cases and after the operation to leave your patient still a woman. Such a result is worth all the time and trouble that it will cost. On the other hand operations undertaken during the acute stage must be complete to be safe, and in those cases that recover the patient is usually left simply a patient forevermore.

Texas Medical Journal, June, 1905.

Bacteria and What we Know About Them —By Dr. J. M. Fort, Paris, Texas.

The Southern Clinic, June, 1905.

A Few Scattering Remarks on Appendicitis.—Dr. Thomas J. Riddell believes that the catarrhal form of appendicitis recover under medical treatment. Prompt treatment in the beginning of the disease is of great importance; but unfortunately many cases are not seen or recognized in time, consequently the prognosis is often unfavorable. There are many recurrent attacks of appendicitis and surgical interference may be absolutely necessary to give the patient a chance for his life. Appendicitis may be developed from different causes, traumatic or idiopathic constipation, primary or habitual, often causes this disease, and especially fœcal impaction. There are cases in which surgical interference is absolutely necessary and should not be delayed while on the other hand there are cases that do not require the knife. According to statistics a large percent of cases recover without operation. Hasty operations should not be resorted to unless under extraordinary circumstances. In a case of recently developed appendicitis proper medical treatment should be enforced for a reasonable time before resorting to the knife. In cases of fulminating character, or in cases when not seen in time, of a chronic nature and probability of the formation of abscess delay is dangerous and surgical interference is the only hope.

The importance of making correct diagnosis in all cases is a "consummation devoutly to be wished," and the next important consideration is the judgement of the doctor to know when and how to operate, to know when and what medicine to administer in certain cases cannot be over-estimated.

The lack of judgement by many scientific men of attainments and activity in the profession in the treatment of the "ills that flesh is heir to" has been apparent for these many years, but it is human to err. We are not infallible. Then let us be up and

doing and hope for the reward of the faithful.

Maryland Medical Journal, July, 1905.

Ocular Manifestations of Gonorrhoea.—By Hiram Woods, M. D.

The Medical Recorder, June, 1905.

A New Surgical Dressing—Report of Cases.—Dr. Jas. Mullin reports a number of surgical cases to illustrate a new, safe and convenient method of dressing in all forms of railway emergency, as well as in ordinary surgical cases. This method is not original with the author but belongs to Dr. Arthur Spohn, of Corpus Christi, Texas.

Railway surgeons are called upon to administer to a class of cases under conditions the most harrowing and extremely septic. Frequently in the vortex of a collision where cinders and grass intermingle with blood and tissue to such an extent as to render asepsis next to impossible. It is especially in these cases that this dressing will prove so beneficial. The following case illustrates the application of this dressing:

Mrs. J., age 23; double purulent otitus media of both ears present since childhood. Health otherwise good, a number of polypi had been removed at different times from both ears. Discharge profuse and foul. A radical mastoid operation was performed on the right side including the removal of the posterior and superior walls of the external auditory canal so as to throw the middle ear and mastoid into one cavity. The skin of the external ear was incised to form a T-shaped flap and pressed back and up into the enlarged cavity. The post auricular incision was closed with catgut. The ear was diseased as usual in these cases, every 24 hours the dressings were extremely soiled and offensive. Some three months later the left ear was operated upon in precisely the same manner, the dressing was made distinctly different. The dressing was put on somewhat heavier than the former operation and the nurse instructed to drop 20 drops of a 40% solution of formaldehyde on the dressing three times daily at a point marked with an indelible pencil over the external auditory canal. This procedure was kept up for six days when the dressings were removed for the first time since the operation and the following conditions were present: an entire absence of pus, either in the external canal, post-auricular incision or the dressings. The incision was found to have united thoroughly by first intention and was dry and firm. The dressings were likewise dry and firm, while the extreme end removed from the middle ear was almost as strong with the odor of formaldehyde gas as was the external dressings. At no time during the six days did the temperature go above normal.

The Texas Medical Gazette, May, 1905.

The Gall-Bladder and Bile Duct Problem.—Dr. Bacon Saunders says that it has come to be generally, it may be said almost universally considered, except by those who are hopelessly antiquated, both as to their pathology and therapeutics, with the exception of occasional cases of so called catarrhal duodenitis confined largely to childhood and early youth that diseases of the gall-bladder and bile-ducts belong to the domain of the surgeon and must in the great majority of cases come sooner or later into his hands for relief.

As in early days of appendicitis great prominence; in fact, far too great prominence in the minds of both the profession and people was given to foreign bodies in the appendix as causitive factors in the productions of that disease, so gall-stones have had an undue influence assigned to them in connection with disease of the gall-bladder and bile-ducts. This has but served to muddy the water, so to speak, and give rise to the impression somewhat prevalent even yet among medical men that "no gall stones no gall bladder disease." It would be difficult to calculate or even to approximate the harm in mortality and invalidism this want of knowledge has caused. It is too well known that in some and, indeed, in many of the most violent and suddenly fatal attacks, there is not even the semblance of a foreign body in the popular acceptance of the term. It ought to be just as well understood and accepted by both doctors and people that many of the most dangerous cases of gall-bladder disease are those in which there are no gall-stones. It should also be recognized that other things than gall-stones cause paroxysms of bilious colic and thus learn that in many such cases it is entirely futile to look for those bodies in the alimentary dejections as a sine qua non to a correct diagnosis. In the light of the above facts a more comprehensive and pathologically accurate term for these conditions would be gall-bladder infection or bile-duct obstruction. Infection being the real potent danger in appendicitis without reference to the special circumstances of its development so is the infection, whatever the factors in its excitation the source of the greatest disaster is gall-bladder and bile-duct obstruction. Appreciation of this will enable the practitioner to interpret symptoms and reach a diagnosis in many cases and suggest the remedy in time to prevent the dangerous and disastrous consequences that often follow unrecognized and neglected infection of the bile channels. Within the last few years operative work on the gall-bladder and biliary channels has cleared

up the question of the diagnosis of obscure troubles in these localities most wonderfully. No field of surgical endeavor has added more to our diagnostic knowledge and given a greater sum total of good in life and health restored by operative efforts than that of the upper abdomen in connection with the liver and the stomach. It is not now so often a question of diagnosis as of treatment that perplexes us. It is passing strange from the standpoint of the surgeons that medical men are often so slow to recognize the necessity for the application of the universal principle of drainage of infected cavities and channels to a similar condition when it exists in the gall-bladder and bile-bearing ducts.

Every single medical agent that experience has taught is beneficial in this condition from calomel to hot water and carlsbad salts is someting with power or supposed power of causing an increase in the bile-secretion, thus flushing out and favoring better drainage of the infected channels. Moderate obstruction to the flow of the current from infective thickening of the mucus lining of the biliary channels perfectly independent of and in addition to the well known and grave dangers from local changes and complications gives rise to a slow and progressive toxemia that will finally end in the complete undoing of the patient.

The exact nature of the operative treatment necessary in acute infectious conditions of these parts depend on the case. Operation at the height of the infection as in similar conditions elsewhere in the peritoneum is followed by a high rate of mortality and should be avoided if the safety of patient will permit. The author concludes by taking up the various points in the operation and pointing out the various procedures as indicated by the conditions present.

Memphis Medical Monthly, June, 1905.

Atonia Gastrica and Gastrectasia.—By H. B. Kincaid, M. D., Memphis, Tenn.

The Effect of Treatment on the Mortality of Pneumonia.— By O. S. McCown, M.D., Memphis, Tenn.

Southern Practitioner, June, 1905.

Origin and Treatment of Malignant Growth.—By Paul T. Eve, M.D., Nashville. Tenn.

Epithelioma of the Skin.—By J. M. King, M. D., Nashville, Tenn.

Nashville Journal of Medicine and Surgery, June, 1905.

Charge to Graduating Class 1905.—By I. T. Altman, M. D., Professor of Obstretrics Medical Department Vanderbilt University.

The American Practitioner and News, June, 1905.

Hernia: Its Complications and Treatment.—Dr. S. G. Bowers classifies the most frequent complications of hernia into irreducibility, inflammation, obstruction and strangulation, followed by gangrene. In an irreducible hernia there is no inflammation, strangulation, nor interference with the blood supply, or one might say no abnormal condition except that it cannot be reduced.

The variety of hernias which are most commonly found in this class are (1) the femoral; (2) umbilical; and last, the inguinal.

The cause of irreducibility of a hernia may be merely the contraction of the tissue through which the neck of the sack passes preventing the contents above from being returned or, again, it may be due to external pressure which will lead to atrophy of that part of the contents which occupies the neck of the sack. Another very important cause is the thickening and contraction of the peritoneum forming the neck of the sack. And one of the most frequent causes is increase in bulk of the contents of the hernal sack after they have passed out. Such thickening is most commonly found in the omentum. There is a tendency to the disposition of fatty tissues in its contents and the size will consequently become greater, or may have a development of fibrous tissue, the outcome of chronic congestion. Adhesions may form and thus prevent return, and it then becomes an inflammed hernia. In all hernias in which the contents of the sac are irreducible omentum is usually its chief component. After this most likely find large intestine and then small intestine.

An inflammed hernia may merely be a local peritonitis, when it is the sac wall which is chiefly inflammed or the contents of sac may also be involved in inflammation. The inflammation may be caused by external injury, improper fitting truss or truss applied without completely reducing the hernia, or it may be caused by too violent and prolonged attempt at taxis.

An obstructed hernia is one which contains intestine, its lumen being obstructed, but there is no interference with the circulation. Obstruction is most common in irreducible hernias. The material causing the obstruction is usually firm foeces, intestinal gases and indigested food. An irreducible hernia may be changed into an obstructive hernia by giving of enemas. By giving an enema in the case of an irreducible hernia we create a peristolsis and an onward flow of the bowel contents and under this vermicular motion and pressure may force

some of the contents through the narrow mesh of the constriction which will not return for the lack of the same force in the obstructed portion.

The most important complication from the standpoint of urgency of treatment is the strangulated hernia. This is a hernia which contains intestine in which the lumen and blood vessels are obstructed by pressure from without. As a consequence of too great a delay in the proper treatment, this will result in irreparable damage to the gut itself. The worst complication of this class of hernia is gangrene, which develops very rapidly in very tight constrictions. Of all the hernias the femoral gives one the greatest concern as to surgical treatment on account of the close proximity of important blood vessels and nerves which does not give the wide latitude to secure tissue for its proper closure as in other hernias. The author concludes by giving a brief outline of both the surgical and paliative treatment of these cases.

Southern Medicine and Surgery, June, 1905.

Dr. J. P. Blankenship points out that the diagnosis of diphtheria is based upon two kinds of evidence—clinical and bacteriological. Which of these two should have greater weight will depend upon the stage of the disease and the location of the invasion. It is possible in an advanced stage of Klebs.Loeffler diphtheria to make a diagnosis from clinical evidence alone, but in the beginning of the disease an accurate diagnosis can only be made with the combined evidence of the microscopes and the clinical symptoms. Through this evidence the indications for treatment become clearly defined.

Symptoms are neither so apparent nor so alarming in the invasion of the Klebs-Leffler bacillus as in cases of staphylococcus and streptococcus. This germ seems to have an anesthetic action locally and the toxin acts as a constitutional depressant. True, Klebs-Lœffler diphtheria is least painful of all anginas. The patient is quiet and usually goes into stupor. The invasion usually takes place in the fauces and spreads to those parts of the mucus membrane which are susceptible, such as the nasal passage, the posterior fauces and the trachea.

Temperature is usually considered an important indication of the gravity of a disease. This rule must not strictly govern in anginas, as the highest temperature is caused by a germ of the least malignancy, namely, the staphylococcus. In the worst form of the Klebs-Lœffler diphtheria there may be not only no increase in temperature but it is sometimes subnormal.

When the Klebs-Lœffler bacillus is associated with other germs in the invasion the symptoms of these germs so obscure the symptoms of the Klebs-Lœffler bacillus that its presence cannot be detected by clinical symptoms until ptomaine poisoning occurs. If the Klebs-Lœffler is the invading germ antitoxin will bring the crisis within 24 hours. Diphtheria antitoxin can do no good, and is positively harmful in some cases of streptococcic angina. The toxin developed by the streptococcus is usually of small importance. In giving antitoxin it should be borne in mind that the younger the child the smaller amount of diphtheritic toxin thrown into the system produces fatal results, and therefore a correspondingly larger dose of antitoxin is required for protection. It is too often the case that physicians apply the rule of dosage of antitoxin and give a low grade to children, whereas it should be exactly reversed. The same symptoms will follow the injection of a five centimeter vial containing 750 units as a five centimeter vial containing 3000 units. When a physician does not know how long an invasion has been going on or how near toxin is to a fatal accumulation, he should give his patient the benefit of the doubt and give high number of antitoxin units.

Special Fractures.—By Duncan Eve, A. M., M. D., Nashville, Tenn.

Virginia Medical Semi-Monthly, June 23, 1905.

Principles of Surgery.—By Stuart McGuire, M. D., Richmond, Va. Lecture V. The Blood, Composition and Function, Description of blood plasma and blood corpuscles, Regeneration of blood after surgical operation, Differentiation between shock and hemorrhage, Blood changes in suppuration, tuberculosis, leukemia, pyemia and hemophelia.

Forcible Removal of Foetus from Uterus —The History, Indications and Means.—By M. J, Payne, M. D., Staunton, Va.

New Orleans Medical and Surgical Journal, June, 1905.

Annual Report of 1905.—To Edwin Boone Craighead, A. M., LL.D., President of the Tulane University of Louisiana, at the annual commencement of the Medical Department, May 3d, 1905. By Prof. Stanford E. Chaille, A.M., M.D., LL.D., Dean of the Medical Department, New Orleans, La.

Ptosis and the Operation of Motais.—By Henry Dickson Bruns, M. D.

Atlanta Journal-Record of Medicine, June, 1905.

Is Scarlet Fever a Septicemia.—By L. B. Clarke, M. D.

Mobile Medical and Surgical Journal, June, 1905

Puerperal Sepsis.—Dr. Wm. W. Harper says when more physicians regard every case of labor a surgical and in its management use the same aseptic principles that they do in a major operation, there will be fewer cases of puerperal fever. When the author began the practice of medicine it was considered indecent to expose any of the parturients person, and that physician was considered most skillful who could present to the fond parents a 10 pound boy without even a glympse of the channel from which it came. The examining finger imperfectly sterilized lifted up the bed clothes, glided along unwashed thighs and after feeling around a non-sterile vulva finally entered the vagina carrying with it a force of Japanese scouts to give battle to the bottled-up Russian reserves, It is not surprising that there were many cases of infection. This condition of things is rapidly changing for what the laity once considered indecent is now regarded as false modesty. There is another obstetrical evil which has come as an abiding legacy, the usual "colored nurse," whose chief characteristics are a ripe old age, slowness of of movements and absolute faith in the doctrine as taught before Lester was conceived. The author does not believe in repairing a torn cervix at once. Should warn patients against the old quilt which is placed under the patient to absorb the blood and advise rubber sheets and towels. In sapramia the lochia is abundant, dark and offensive, the cervix is open and the uterus large and boggy. In streptococcic infection the lochia is scant or normal, of a bright red color and non-odorous, the uterus is colored and well contracted.

In sapramia the bowels should be thoroughly opened and an ice-bag applied to the abdomen. Strych. 1 30 and ergot mxxx should be given every 3 hours to produce and maintain a tonic contraction of the uterus, thus lessening the opportunity for the formation of fresh blood clot. If the stomach is tolerant the patient should take 5-15 gr. quinine per diem. The diet should be liquid and concentrated. In this condition the system is specially tolerant of alcohol, and Pollock recommends 1 ounce every hour until alcoholic stupor takes the place of delirium. Healse recommends intervenous saline injection.

The sharp curette is contraindicated in these cases, for which three very good reasons are advanced. The vagina should be douched 3 or 4 times a day with a 1 or 2% solution of carbolic acid. The author does not use any antiseptic solution in the interior of the uterus. Interuterine douches are almost always followed by rigors and increased temperature. If these means fail, Pollock advises isolation of the uterus which is as follows: "Catch the post-lip of the cervix and pull it out and up as far as possible until V appears (utero-sacral lig). Open at apex, put back vagina and Douglas pouch. Introduce fingers and separate peritoneal cavity (gush of fluid comes) and break up all adhesions behind top of uterus and pack up behind with dry iodoform gauze (non-glycernated). Leave in four days, never irrigate cavity, but introduce finger every second day into opening in vaginal wound to keep it from closing. After packing is removed irrigate vagina every day with boracic acid solution. He uses 5 yards of gauze filling loosely the entire pelvic cavity behind and on sides. The gauze extends to the top of the uterus and crowding it forward obliterates the uterovesicle space. Ovaries and tubes rest on top of gauze.

In puerperal fever due to streptococci the medical treatment is the same as given for the sapremic variety. There is no surgical treatment.

Abstracts of the Leading Articles of the Month.

X-Rays in Sarcoma.

McMaster (Canada Lancet) reports five cases of sarcoma in which treatment with the x-ray proved entirely successful. The first patient, a boy of 14 years, had a large sarcoma of the right superior axilla. Fifteen vigorous applications, made in forty-two days, given both on the outside and through the mouth, caused a diminution in the size of the growth with a decided relief from pain. After the surgical removal of the entire bone and tumor half a dozen more treatments were given, and there is no sign of recurrence after three years. From the second patient, a round-celled sarcoma was removed from the region of the parotid gland. X-ray treatments were begun soon after the operation and fifty treatments were given. At first they were given three times a week, and after six weeks, twice a week. Over two years have elapsed since the operation was done and there is no sign of metastasis nor of recurrence. The third case was similar to the second. A tumor was removed from in front of the ear and on microscopic examination it was found to be a small-celled sarcoma. A new development resulted at the site of operation within a few months. After a dozen energetic treatments with the x-ray there was marked evidence of softening in the growth. Coley's toxins were used in conjunction with the x-rays and were pushed to the limit of tol-

erance. Except for a transient erythema, and the formation of an abscess, the case progressed favorably. The author says that the result was all that could be desired, and a cure is being hoped for with increasing confidence. The fourth patient had a large, hard swelling at the angle of the jaw, which extended down the neck to the clavicle and up behind the ear for about two inches. The case was considered inoperable. It was rayed for four months. In its upper part softening and suppuration took place and the growth melted away rapidly. About the third month of treatment the use of Coley's fluid was begun and continued for five weeks without result. The patient continued to improve and there is now, after about ten months, not the slightest evidence of anything ever having been wrong. The fifth patient, a young woman aged 21, had a small sarcoma removed from in front of the ear. It recurred and was again removed, only to return once more, growing more rapidly than before. The case is improving under x-ray treatment and the author promises a full report later. In none of these cases did autointoxication present any difficulty. In all of them x-ray irritation was difficult to produce, and, being produced, the patients reacted promptly. The patients tolerated large doses of radiation for a protracted period of time. The author considers the x-ray a valuable curative measure in the treatment of sarcoma.

Mitral Stenosis.

Henry (American Medicine) follows Broadbent in his method of studying mitral stenosis, that is, he divides the disease into three stages. The diagnosis in the first stage is comparatively easy. At that time there is a presystolic murmur easily recognized as such by the fact that it is followed by the first and second sounds, both audible at the apex. The second stage is indicated by disappearance of the second sound at the apex, this being due to dilatation and hypertrophy of the right ventricle and feeble propulsion of blood into the aorta. The presystolic murmur continues. The onset of the third stage is marked by disappearance of the presystolic murmur and the establishment of signs of tricuspid regurgitation. The author calls attenion to what he believes is another phase of mitral disease, and one to which no distinct allusion is made by authorities on diseases of the heart. It is an extreme arrythmia which may persist without intermission for months or even for years, The clinical syndrome of these cases is the following: Marked anæmia, with somewhat dusky skin and cyanotic lips, a tendency to bronchial catarrh, marked periods of improvement, with little or no diminution of the arrhythmia, and no œdema whatever, or none until shortly before death. The author has notes of three such cases. In none could the slightest murmur be detected by any of a number of qualified observers. Autopsy proved that the diagnosis of mitral stenosis was correct.

Dilatation of the Cervix.

Norris (American Medicine) reviews the different methods that have been proposed for artificially dilating the cervix in the practice of obstetrics. He bases his remarks on his personal experience and not on a review of the literature. He concludes: "(1) The necessity for the induction of a premature labor by a method requiring less than twelve hours, is extremely rare. (2) The method most frequently employed, and most satisfactory in my experience, has been a combination of partial mechanical dilatation, followed immediately by the insertion of a bougie and an extraordinary large Voorhees bag incompletely filled. (3) For the relatively rare cases in pregnancy or labor requiring accouchement force, the choice of rapid mechanical dilatation depends especially upon the characteristic of the cervix, the general state of the patient, and the firm determination not to attempt too rapid dilatation. Bossi's or De Seigneux's instrument is cleaner, less tiresome, applicable to the same class of cases, and is not more dangerous than manual forcible dilatation. (4) Duhrssen's vaginal section is a most valuable operation in the hands of an expert obstetric surgeon, and should be preferred to rapid metallic dilatation, except when conditions favorable to the latter are unmistakably present. (5) For the treatment of the gravest form of placenta prævia and of accidental hæmorrhage, Duhrssen's hysterotomy, in the hands of an expert vaginal operator, should prove the best method of treatment ever offered."

The Dietetic Treatment of Dyspepsia.

Hutchison (The Practitioner) considers two groups of dyspepsia cases: 1. Those in which there is organic lesion of the stomach; 2. purely functional cases. Digestible food for either group means that which is easily dissolved. The secretion of gastric juice is influenced by the chemical constituents of the meal and by the psychical condition of the patient. Of the organic diseases ulcer, dilatation, and acute and chronic gastritis are considered. In ulcer rest and unirritating food in small quantities are indicated. In dilatation the meals should be small, fermenting substances should be avoided, and the object should be to supply food which can be readily passed into the intestine. In gastritis rest and unirritating food are again the indications. In the functional dyspepsia there may be ex-

cess of acid. deficieney of acid-with impaired motility, or flatulency. For the acid dyspepsia the author advises such foods as are most capable of absorbing and fixing hydrochloric acid, that is, a diet rich in proteids. Fats may also be taken freely. If the acid production is excessive milk alone may be indicated. If the acid secretion is deficient soups, salts, alcohol, and condiments should be taken freely while proteids should be avoided. In the cases in which flatulency is the chief symptom fermenting substances must be avoided, and the food should be as dry as possible. Hot water may be taken freely.

Diazo Reaction in Tuberculosis.

Budden (British Medical Journal) from his observations concludes that the diazo reaction is not of any value in the prognosis of chronic tuberculosis. The positive cases have died, but they were the cases without hope. The appearance of the reaction corresponds with the exacerbations of the tuberculous process, but it follows the onset of the graver symptoms, and though it disappears with improvement, such disappearance again follows the suspension of the alarming signs; while again it may disappear because the patient is growing weaker. It is probable that every fatal case of tuberculosis will yield the reaction at some period of its course; we cannot say any case is negative unless it has been tested continuously for long periods. Of seventeen cases which were negative and yet proved fatal, six succumbed to intercurrent diseases. The author followed the reaction in 3,000 cases. Of these, 600 were healthy individuals, and not one yielded a positive reaction. In tuberculosis, 96 out of 672 were positive; measles, 18 out of 25; typhoid fever, 17 out of 21; typhus, 5 out of 5; pneumonia, 5 out of 57; and puerperal septicæmia, 4 out of 4. In the remaining cases, comprising almost every acute malady of common occurrence, the reaction was uniformly negative.

The Care and Feeding of Premature Infants.

Morse (American Journal of Obstetrics) states that there are few authentic cases of survival of infants born before the twenty-seventh week of pregnancy. A premature baby being an undeveloped baby must receive much greater care and attention than a mature infant. They lose heat rapidly and cannot bear low temperatures or exposure, they also offer very little resistance to infection. The first object with a premature baby is to keep it alive, the second is to develop its organism to the stage normally reached at term. Incubators maintain an even temperature, but none of them supplies a sufficient supply of pure fresh warm air. A substitute for an incubator is a padded crib or basket, which must be carefully protected from draughts. The food should be breast milk if possible, otherwise a modification of cow's milk. The older the infant the better the prognosis, and the prognosis is bad if the weight is under two pounds, but good if over four pounds.

Delivery of Twins with an Interval of Seventeen Days.

Pauplin (Interstate Medical Journal) reports the case of a married woman of twenty-five who was delivered of a living child, and soon thereafter of a normal placenta, during the eighth month of her second pregnancy. A second fetus was distinctly palpable, its heart sounds being clear and loud. Some soft tissue could be felt in the vagina, and adjoining it on the left a cervix was found, comparatively hard and firm, its external orifice being partially closed. The examining finger could not pass through the cervical canal. Labor pains stopped completely, and the woman went to sleep. The next day no uterine contractions could be observed. There were no lochia nor any signs of the secretion of milk. Nine days later the patient left the bed. Sixteen days after the delivery of the first child the membranes of the other fetus ruptured suddenly, and the next morning another living child was born. The placenta was shortly afterward expelled. Like the first, the second puerperium took an absolutely normal course. This time the breasts soon became engorged, and milk was secreted in sufficient quantities for both children. An examination a few weeks later showed that the uterine cavity was divided into two sections by a broad septum, the presence of which was ascertained with the uterine sound. On palpation the uterus did not show any anomalies.

Adaptation and Tuberculosis.

Adami (Am. Med.) emphasizes the fact that in infectious diseases in general, while the bacteria grow more particularly in one organ or tissue the successful counteraction of the disease is not a local matter. In fact, the tissues of the infected organ are so injured that they cannot themselves play any very active part. The counteraction is by the rest of the organism; in part by the leucocytes developed in the bone marrow and elsewhere, in part by other tissues, which discharge into the blood diffusible antitoxic and bactericidal substances. The author calls attention particularly to the recent observations of Wright and Douglas that the phagocytic activity of the leucocytes is not called into play to any extent unless the blood serum contains certain substance

which activate the leucocytes. These substances appear to be developed apart from the leucocytes, that is to say, by other tissues of the body. Applying these considerations to tuberculosis, the author points out that when the tubercle bacilli grow locally there is a slow diffusion out of their toxins; and it is by the adaptation of the rest of the tissues to these toxins that the leucocytes and these other tissues become accustomed to produce diffusible antibacterial substances. In favorable cases these are present in amounts so considerable that the local growth of the tubercle bacilli is arrested and healing tends to ensue. Post-mortem observations show that this arrest is the rule rather than the exception. Applying these considerations to the treatment of tuberculosis the author shows first, that the tuberculin treatment is but an attempt to carry out the natural process; that tuberculin is merely a concentrated extract of the toxins of the bacilli, and these now are injected into the organism at a distance from the site of local growth of the bacilli. Their action must be to stimulate the cells of the rest of the organism, and to produce increased amounts of antibacterial substances. The cells, however, may be in a state of low vitality so that they do not react, and hence this treatment is by no means constantly successful. Modern treatment similarly, the author points out, is a carrying forward of the same idea. The disease as such is felt severely alone, every attempt is made to improve the general tone of the organism by rest, good food, and fresh air. The cells gain improved tone and respond to the toxins, producing increased quantities of the antitoxic and antibacterial substances. Here, again, it is the body as a whole and not the local reaction that brings about arrest of the tuberculous process. The adaptive processes on the part of the bacilli are next considered. These also are capable of being modified according to alterations in their environment, so that by passage they are found to adapt themselves more and more to the organism of any particular species. By passage through the organism of one species the bacilli become more and more virulent for that species, and thus may become less adapted to growing the organism of another species. The author is of the opinion that this is the case in general, and with tubercle bacilli grown in the human bovine organisms respectively in particular.

The Nervous System in Chronic Nephritis.

Leszynsky (Medical Record) deals chiefly with the symptoms referable to disorders of the nervous system that are not infrequently observed in chronic nephritis. All of the following manifestations may be expressions of kidney insufficiency: Cephalic paræsthæsiæ; headache in various degrees to true attacks of migraine; insomnia; numbness in the extremities; neuralgic pains in different parts of the body; vomiting; muscular twitching; monospasm or hemispasm to general epileptic convulsions; amaurosis; deafness; transitory attacks of aphasia; facial paralysis; paresis or paralysis of one extremity; hemiparesis, hemiplegia, or paraplegia; gradual or sudden coma; delirium; stupor: insanity; and permanent hemiplegia with or without aphasia. The author discusses most of them in detail and reports summaries of a few cases in order to emphasize the deplorable fact that sufficient attention is not paid to determining the significance of nervous symptoms. The author has seen, in consultation, many cases of chronic nephritis with nervous manifestations which were incorrectly diagnosticated by the attending physicians. In some of the cases the urine had not even been examined.

Influenza.

Albutt (British Medical Journal) states that influenza is apparently a very old disease, and it has been known of since the twelfth century. It seems to be endemic in Northern Central Asia, just as cholera is endemic on the Ganges. The outpost from which it is definitely traced to us is Bokhara, and it follows the three chief trade routes in Asia westwards in a very remarkable way. It travels in the time corresponding to the most rapid means of locomotion. Within the main flood of an epidemic there are subsidiary or secondary areas of intensity, due to the recrudescence of germs of the disease that may have become latent. The terrible suddenness of the disease is accounted for by the very short incubation, apparently sometimes even less than twenty-four hours, and nearly always less than forty-eight. The contagion is carried upon clothes, upon things as well as in human beings, although probably only for a very short time, perhaps a few days only. The disease is propagated in the sputum and spray from the respiratory tract; and those cases in which the respiratory tract is unaffected, are non-contagious. There is no doubt as to the specific character of the Pfeiffer bacillus—but of its habits, where it is generated, whence it comes, and how it usually survives we are entirely ignorant. It may be a constant denizen of the mouth. Young children are not very susceptible, and except for the ear, do not suffer much from sequels. The malady in them passes off quickly, and convalescence is rapid. Five or six months' immunization is usually conferred by an attack, even on the most

susceptible; twelve months is the more usual respite. As regards the morbid anatomy the lesions are inflammations of an erysipelatous type. If there be lobar inflammation of the lung, it is almost always associated with lobular patches, and is very seldom confined to one lung. In influenzal pneumonia the sputum is mucous or mucopurulent, and not rusty. Like pulmonary tuberculosis influenza may excavate the lung; the patient may be badly wrecked yet ultimately recover. It is a most calamitous event when influenza falls upon a lung already tuberculous. Influenzal pleuritic effusions do badly, and pericardial still worse —also empyemas, where streptococci are usually also present. The heart may get into a very perilous condition, yet post mortem of the changes may be very slight, the danger lying in the nervous endowment of the heart rather than in the muscular fibre. The author lays great stress from a diagnostic point of view, on the extreme suddenness of the onset—ordinary colds creep on. The prostrating effect upon the nervomuscular system is frequently terrific. In convalescence the malaise very often departs as suddenly as it comes on—a brusque recovery from a protracted convalescence. The temperature is not high or very prolonged, but often falls considerably below normal. The disease may be divided into four forms—respiratory, nervous, gastrointestinal, and continuous. Contrary to the general rule in almost all acute febrile diseases, the urine in influenza is not high colored nor lateritious. Convalescence is terribly slow and its duration is in no proportion to the attack. Neuritic and paralytic attacks are not so frequent as formerly. Angina pectoris and phlebitis are not uncommon. Minor and tedious perversions of the heart's action are very abundant. Murmurs are not the rule. Chloroform should be avoided. Dyspepsia persists for a very long time, and also the obstinate recurrence of profuse paroxysmal sweats. The patient should go to bed the moment influenza is suspected, and remain there until the acute phase is past. The disease is very much shortened by a non-toxic diet. Parsons, in discussing the epidemiology of the disease, tells us that it spreads by personal infection. The striking distance of influenza is longer than in some other diseases—the bacillus may be carried several feet through the air by the acts of coughing, sneezing, etc. The outbreak of the disease cannot be ascribed to any particular kind of weather, but the epidemics are more fatal in weather when the temperature is below the average. It is more fatal in the later periods of life, and in agricultural and residential districts. Bad sanitary conditions, such as favor the prevalence of diarrhœa and typhoid fever, seem in some way inimical to influenza.

An Address on the Operative Treatment of the Conditions of the Gastro-Intestinal Tract Which Result from Chronic Constipation.

Lane (London Lancet) believes that chronic constipation, in which the colon is over-burdened with fecal masses, may bring about a large number of severe anatomical derangements in the abdominal cavity. Constipation may lead to displacement of the viscera, to distention, to dilatation, to adhesions between coils of intestine and thus to stenosis. Even the appendix may be forced from its normal position, the dislocation leading to its congestion and finally to inflammation. Clinically all sorts of disturbances of digestion may be traced to the same source, as well as attacks of pain so violent as occasionally to lead to the diagnosis of renal colic. Respiration is interfered with. Toxic substances pass into the blood and impair the resistance of the body to disease. The patients suffer often from psychic depression. The skin takes on a dirty tint as a result of increased pigment deposit. The fat of the body disappears and the other tissues lose their tone. Ptosis of the abdominal viscera sets in and, often enough, symptoms of appendicial trouble. Frequently the "appendicitis" is operated upon while the fundamental trouble, the overloading of the cæcum with fecal masses, remains untouched and its symptoms unrelieved. Occasionally the operative removal of the adhesions present may do good, but in most cases a more thorough procedure is requisite. The best operation consists in dividing the ileum four or five inches above the cæcum, closing both ends, and then effecting a lateral anastomosis between the proximal portion of the ileum and either the sigmoid flexure or the upper part of the rectum.

On Fœtal Menstruation and its Importance.

Halban (Monats. fur Geburts und Gynakol) says that a discharge of blood from the female generative organs in the first few days of life is by no means an uncommon occurrence, and has generally been considered of but little importance. The author shows that this is a part of a physiological effect upon the fœtal uterus of certain substances circulating in the maternal blood as a result of pregnancy. Histological examination of fœtal uteri shows great hyperæmia of the lining, and, indeed, changes which are quite analogous to those of menstruation. The maternal uterus forms a decidua as a result of the irritation caused by some substance produced by the developing embyro, and the fœtal uterus reacting in a

like but less marked manner, produces changes analogous to menstruation. There is much evidence to prove that the irritating substance is produced by the placenta, and may be regarded as a kind of internal secretion. After delivery, when the placenta is no longer present, involution of both the maternal and fœtal uteri occurs, sometimes with obvious bleeding from the latter. The breasts of the fœtus in a similar way show like changes to those of the mother, and thus explain the mammary reaction sometimes seen in newly-born children, both male and female. The male fœtus, according to the author, shows changes in the prostate as well as in the breasts, which go to prove the truth of these statements. These changes represent the physiological reaction to toxins, which may, under other conditions, act pathologically, and so the theory is advanced that the same toxins may produce changes in the kidneys, leucocytosis, increase of blood fibrin, and such a serious condition as eclampsia. In the latter disease it has been recently shown that the fœtus shows quite analogous changes in its organs to those found in the maternal organism.

Phlegmonous Dissecting Perivaginitis.

Acconci (Rev. de Gynecol. et de Chirur. Abdom.) under the above title, describes a case in which the whole vagina, together with the vaginal portion of the cervix uteri, was shed. The patient, who was 29 years of age, had had three children. She was suddenly seized with dyspnœa, rigors, high temperature, and general depression. These symptoms appear to have continued for at least a fortnight before the patient's admission to hospital. In hospital it was noticed that a very offensive, yellowish, blood-stained discharge escaped from the vagina. The patient was in a very depressed condition, with frequent rigors and continuous abdominal pain. A mass was passed from the vagina some days later, which proved to be the whole vagina and the vaginal portion of the cervix; the vagina had become completely inverted during its passage. From this time the patient's general condition began to improve, and she eventually left the hospital well, but with a vesico-vaginal and rectovaginal fistula. Subsequently the vagina contracted, and menstrual fluid accumulated in the uterus. Attempts were made to keep a permanent opening through what had been the vagina, but as these were unsuccessful, the uterus was removed per abdomen: the vaginal fistulæ were also successfully repaired. No bacteriological examination was made at the time of the expulsion of the vagina. The whole thickness of the vagina was expelled, and the walls of the canal were infiltrated by many micro-organisms of various sorts. The author has collected 29 other cases of this condition. He divides them into three groups. In the first (like his own case) the perivaginitis appears to have been primary; in the second it developed during the course of enteric fever or pneumonia; and in the third it was the result of local treatment by perchloride of iron. The majority of cases belong to the first group. Death resulted in five out of 20 cases. In all the cases that recovered there was more or less trouble from occlusion of the vagina. In all cases the vaginal portion of the cervix was expelled with the vagina.

The Early Detection of Uterine Carcinoma.

D. H. Craig (Medical News) refers to his previous article relative to the proper time for the repair of cervical lacerations, stating that in the investigation on which it was based, he was unable to find evidence of a single case of cervical carcinoma originating in a uterus in which a lacerated cervix had been successfully repaired without a subsequent trauma. He is emphatic in the assertion that there is no characteristic first or early symptom of uterine carcinoma of either cervix or body. He made a careful study of the history of 78 cases of uterine cancer, finding the first symptom to be a non-characteristic leucorrhea in 45; hemorrhage in varying degree in 21, and pain, preceding both leucorrhea and bleeding (often by many weeks) in 12. He urges upon gynecologists the imperative necessity of making a thorough physical exploration of the pelvis, both bimanually and with the speculum, of every woman who has pelvic symptoms. Great care should be exercised in securing suspected pathological tissue for the microscope. Manipulation of the marginal area of malignant tissue, and, much more the excision of a wedge-shaped piece increase the danger of dissemination and the patient's consent to immediate radical intervention should be previously secured in view of the possibly unfavorable showing by the microscope. Patients should be taught that a foul discharge is not the only positive sign of malignancy, and that a departure from the normal onset of the menopause is in itself suspicious. Irregular flowings must be carefully investigated and their significance interpreted in the light of the findings by local examinings.

Let the Lungs Alone in Consumption.

Hutchinson (Medical Record) says that it has been learned by bitter experience that one must practically ignore the bacillus in the treatment of the consumptive, and that the same point of view is being arrived at

in regard to the lungs. Among the reasons for letting the lungs alone in treatment is the fact that very few remedial measures at command have any specific action whatever on the lungs, and it is being more and more clearly recognized that consumption is not, properly speaking, a disease of the lungs, but is merely a local (pulmonary) expression of a disease which involves the entire system. There are no tonics or alteratives which improve the nutrition of the lungs, and even the expectorant drugs have been proved to be lacking in the virtues formerly ascribed to them. Sprays, etc., are ineffectual in reaching the bronchi, and in most cases the so-called pulmonary gymnastics and exercises serve simply to drive the infectious material deeper into the hitherto uninvaded areas of the lungs. The author has already shown that the chest of the consumptive is round instead of flat, and that exercises intended to develop the chest as such do harm instead of good. Bodily exercise of any kind is now believed to be distinctly injurious, and absolute rest is indicated in any case in which the afternoon temperature rises above 100 deg. F. Researches by Robin and Binet made over four years ago on the actual gaseous interchange in consumptives have shown that the tuberculous patient consumes a much greater amount of oxygen and gives off more carbon dioxide in proportion to his body-weight than the normal individual. In short, it would appear highly probable that the tuberculous patient is to be regarded in the light of one who is pouring nearly half the heat of the fuel which is burned in his body furnace up the chimney, in the form of smoke; that the food which he takes, instead of being assimilated and decomposed by anærobic processes in the body cells, is burned in the blood and in the lungs. Any means, therefore, which will tend, so to speak, to clog the throat of his chimney and prevent this fatal escape of heat and energy, whether by drugs like creosote, iodoform, cod-liver oil and arsenic, or by pouring in an enormous quantity of food rich in heat value, will tend to restore the balance of gaseous interchange and enable him to return to the normal.

Bright's Disease in High Official Circles at the Nation's Capital.

Macdonald (Medical Record) says the strenuous life, excessive mental activity and the corresponding degree of physical quiescence, and years of overindulgence in rich foods, with its associated high blood-pressure, are the essential causes which render Bright's disease frequent in the high official circles in Washington. In conclusion, the author emphasizes the following facts: Unemployed food products become toxic irritants and menace the structural integrity of the kidneys. Man is an organism built round an eliminative system; when that is abnormal he cannot be normal. When the balance between ingestion, metabolism, and elimination is absent, danger is present. Apparently nutritional excess is the germ of nephritis. Mental activity and physical quiescence aid in its production. Carking care and the corrosive influence of worry and mental strain render prominent aid in producing it. It is prone to attack the intellectual and the anxious. Alcohol, while affording it encouragement, has been given a too conspicuous place as a causative agent. Is is an extremely insidious disease, and is often well advanced when discovered. It is so far-reaching that its first noticeable effects may be visited upon organs and tissues remote from the original disease. The conditions which lead to it are quite amendable to correction if efforts are made sufficiently early. It occurs somewhat frequently at the nation's capital because the congregation of eminent public men means a concentration of worries, wealth, and official feasting.

Alkaline Beverages in Pneumonia.

Todd (New York Medical Journal) says that a rational consideration of the various conditions that are grouped together to make up the disease called pneumonia, brings the inevitable conclusion that in the treatment of the disease we should do all in our power to promote leukocytosis through the entire course of the disease, also to preserve the proper alkalinity of the blood, for upon this depends the functional life and activity of its living cells to perform their work of growth, repair, and also of the removal of waste products, the destruction of the bacteria and their toxins. We should also maintain the normal specific gravity of the blood. The author believes that these requirements are accomplished by the administration of alkaline saline drinks from the inception of the disease, and during its entire course. Of a solution of 2½ gr. of sodium chlorid and 1 gr. of potassium bicarbonate to 1 oz. of cold water, from 6 oz. to 8 oz. should be given every two hours. The addition of a teaspoonful of lemon juice converts it into a refreshing drink, which is gratefully accepted by the patient. Besides this drink, the patient should be allowed all the pure water desired.

Epidemic Cerebrospinal Meningitis.

Huber (Medical News) suggests the use of intranasal germicides, on account of the possibility of the germ entering the cranial cavity through the lymph and blood circulation. Notwithstanding the general belief in nontransmission from person to person,

it is well to discourage contact. Multiple cases in the same house and among attendants favor the theory of communicability. Lately spread of the disease has been attributed to the flea. Following each thaw a new crop of cases has been noted. The symptoms are those of exaggerated nerve sensibility in the early stages. The distinctive features are sudden onset, mental involvement, pain, and rigidity of the muscles of the back of the neck, vomiting, and headache. The invasion may be mild. Osler describes three forms, malignant, ordinary, and anomalous. Difference in virulence causes faulty notions as to the effects of treatment. It is impossible to predict subsequent progress from the initial symptoms. Lumbar puncture, apart from its diagnostic value, relieves intracranial pressure to a certain extent. Injection of antiseptics has not yielded brilliant results. Experiments at the Roosevelt Hospital with diphtheria antitoxins have not yielded brilliant results reported elsewhere.

Tuberculosis Vaccination Upon Cattle Infected with Tuberculosis.

Pearson and Gilland (Uni. Penn. Med. Bull) had the opportunity of testing the effect of vaccination on some young cattle already infected with tuberculosis. This treatment seemed to have a decided effect on the course of the disease, six animals thus treated being favorably influenced, the process being kept in check, and in three animals undergoing a retrogression. That is to say, the treatment exerted a distinctly curative effect. These experiments do not justify conclusions or inferences as to the probable effect of similar treatment on older or more extensively diseased animals, until further observations on a larger scale are at hand.

Functional Test for a Diseased Heart Muscle.

Herz (Deutsche medicinische Wochenschrift) says that insufficiency can be determined long before there are valvular changes, and the method described by him for this purpose is very easily carried out. The author counts the patient's pulse and then holding him by elbow and wrist of flexed forearm, the patient is told to extend this as slowly as he possibly can, his attention being fixed on the movement; the right forearm is usually chosen as having a finer innervation. The patient must not contract his muscle, nor open the arm too quickly; nor must the physician aid the movement in the slightest. Flexion and extension are performed several times, and the pulse again counted. In the case of a normal heart the pulse-rate will be the same or slightly increased; in the case of an insufficiency strong muscle, the pulse-rate will be lowered, the pulse fuller and slower. In abnormally rapid hearts he has known the pulse to slow as much as 40 beats. The author considers this a certain means of determining at a very early date an insufficiency of the cardiac muscles. In cases of atheroma, diabetes, nicotin poisoning, etc., he has made a diagnosis of muscular insufficiency, no other symptom pointing to its existence; later developments justified the diagnosis. In fatty heart the result was always inconstant; in the hypertrophied heart of chronic nephritis the result was always negative, and the author believes such a muscle to be healthy, even though enlarged.

Changes of View in Appendicitis Work.

Morris (Medical Record) says that after dropping out of his practice gauze packing, iodoform gauze, long incisions, and the expenditure of time in unnecessary detail, reduced his mortality to 2%. The author's methods at the time were held to be dangerous. The author now uses a cigaret drain, makes an incision one and a half inches long, preferring to work by touch rather than sight, and completes the operation in from five to ten minutes. The author does not advocate the removal of normal appendices. The author believes in operating as soon as the diagnosis is made with few exceptions, if there is a competent surgeon to be had; otherwise he recommends ice, opium, and starvation. In the interval he operates only when the appendix on palpation is found to be the definite seat of chronic infection or adhesions, which cause symptoms. The author now never uses silk-wormgut for buried sutures.

A Report of Six Cases of Perforation in Typhoid Fever in Children.

Crozer Griffith (Association of American Surgeons) gives two reasons for reporting these cases: 1. The occurrence of typhoid fever and perforation in childhood is unusual. 2. The symptoms of perforation in children offer difficulties in diagnosis greater even than in the case of adults. In children there is less apt to be collapse, severe abdominal pain, uncontrollable vomiting, abdominal tenderness and abdominal distention. Very brief notes of the cases were given, the presence or absence of the cardinal symptoms being noted: Case I.—A girl of 12; severe abdominal pain began on the twenty-third day. There was no vomiting, collapse, or fall of temperature. Twelve hours later she began feeling ill and 24 hours later vomiting and distention appeared; the diagnosis of perforation was then made. Case II.—A boy of 11; had

pleurisy as a complication of unsuspected walking typhoid. After eating ice cream, abdominal symptoms appeared and the diagnosis of gastric indigestion was made. Two days afterward rose spots appeared and the diagnosis of typhoid and perforation was made. This case was completely misleading. Case III.—Symptoms of perforation were perfectly characteristic at the onset but later disappeared. Operation was not performed until 40 hours after, when symptoms had again appeared. Case IV.—Vomiting was the first symptom; there was no fall in temperature, pain, or collapse. Operation was refused. Case V.—A girl of 4 was convalescing from a mild attack of typhoid and developed some abdominal pain, unlocalized, and vomiting. There was no change in temperature, the pain ceased, there was no distention nor abdominal tenderness. The patient was sitting up in bed and apparently doing well. The temperature then gradually rose, the patient became ill, and died the next day. Perforation was not suspected. Case VI.—A girl of 6 gave a vague history of abdominal pain and vomiting, but no fall in temperature. She was in good condition six hours later, though perforation was suspected. Twelve hours later she was still better, but in two hours became worse. Operation was finally performed, but death occurred. Most of the patients were seen in consultation and some would have been operated upon if possible, but still the report is a record of failures. The author in reviewing the cases feels that the best was done under the circumstances which surrounded each case and the symptoms that were present.

Diagnostic Value of Rectal Examination of Children.

Mummery (British Journal of Children's Diseases) recommends it as a routine practice.

The examination, as a rule, is best made with the child lying upon its back on a couch with the thighs well flexed upon the abdomen. The first finger of the right hand is then used for the rectal examination, and the left hand is kept upon the child's abdomen. In this way the front and right sides of the abdomen can be examined. To examine the left side the child can be simply rolled over on to the right side. In this way the examiner is enabled to explore the left side of the pelvis and abdominal cavity without taking the finger out of the rectum. If it be preferred, the left forefinger may be used for examining the left side, and the patient kept in the dorsal position.

In some cases additional information may be obtained by having the child held up in a crouching attitude, so as to allow the force of gravity to bring into contact with the finger any tumor or diseased organ previously out of reach.

If any inflammatory condition is present it is better to administer an anesthetic.

It should always be a rule to examine the rectum when a child is suffering from diarrhea and tenesmus which does not readily react to treatment. Cases of chronic constipation in children may also be the result of obstruction of the bowel caused by tumors, such as sarcomata or the congenital sacral tumors, the presence of which can be detected only by such an examination. The examination is a valuable aid in the diagnosis of tuberculous peritonitis. The characteristic matting together of the intestines, the thickened, edematous condition of the walls of the intestine, the presence of enlarged mesenteric glands and of localized collections of pus, may be detected in this way, and form not only a valuable aid in the recognition of this condition, but in gauging the progress and severity of the disease.

Perhaps the greatest value of such examinations is in connection with diseases of the female pelvic organs of infants and young children. It is only recently that the possibility of children of tender years suffering from diseases of the uterine appendages has been recognized. In one child, aged 22 months, an ovarian cyst was diagnosed through a rectal examination, and successfully removed. Two cases of pyosalpinx discovered by rectal examination are on record, and both cases were brought to health. The rare complaint of tuberculous disease of the uterine appendages of children has also been diagnosed by rectal examination.

Experiences in 1,000 Operations for Appendicitis.

Kummell (American Journal of Surgery) says that in former years 96% of cases were supposed to be cured without operation. Since then the point of view has completely changed, the question now resolving itself into when we had best operate. Numerous cases in the same family are found, also a predisposition in some families. Countries in which excessive meat diet is customary, show most cases of appendicitis. Certain infectious diseases, especially tonsilitis and influenza, have a causative influence. In the latter the bacilli of influenza have been found in the appendicular pus. Colitis is another frequent cause. The apparently increased frequency of appendicitis is largely due to a better diagnosis, as many cases were formerly classed as ileus, gallstone and kidney disease; especially were the cases in which the pain was referred to the left side, umbilical or hypochondriac region not re-

cognized. The diverse pathological findings do not correspond with the clinical picture and very often, in the interval, the changes found are surprisingly slight, when we consider the severity of the preceding acute attack. Consequently and conversely, the clinical course will also fail to indicate the severity of the pathological changes. This uncertainty causes the chief dangers in appendicitis, and the frequency of recurrence makes a radical cure more desirable and imperative. Severe pathological changes may develop without symptoms, and some slight trauma, dietary error or bacterial invasion will then suffice to cause a hyperacute attack. The fate of the patient will depend upon the formation of adhesions, location of the appendix, length of the omentum and other well known factors which aid or hinder a localization of the process. The prognosis can never be made with any certainty and the diagnosis is often difficult or impossible. Cases with typical symptoms of a subacute character or of a rapid perforative type do not cause this difficulty, but those in which the pain is felt at some more distant site, or preceded by long chronic illness often diagnosed as hysterical or neurasthenic, or finally those in which bladder symptoms are alone present or most prominent, are, indeed, obscure. Not rarely the picture is that of adnexal disease and is aggravated during the menstrual period; sometimes a concomitant adnexal diseases is actually present. The temperature is not a reliable guide; the pulse in the acute stage is of greater value, though a pulse rate of 100 does not necessarily indicate a light attack while a pulse of 120 is always a sign of serious disease. After perforation 60-70 pulse beats per minute have been noted. Chronic constipation or equally chronic diarrhea is not uncommon. The symptoms of ileus are misleading; it is in these cases of paralytic ileus from peritonitis that atropin has produced "wonderful cures." Of the 1,000 operated cases 695 were opened during the interval, mortality ½%; of 49 operated in the acute stage and early, 3 died, or 6%; 178 cases of encapsulated abscess showed a mortality of 10% and 82 cases of diffuse peritonitis had the high death rate of 89%. Of the interval cases, one died of operative infection, two of lung emboli and one of pneumonia. The author waits four to six weeks after all febrile symptoms and trace of exudate have disappeared before operating; 36 cases had a coincident salpingitis.

Patients having had one attack should always be operated upon; chronic cases without fever also require operation if the pain continues.

The time to operate formerly was placed in the interval; light or medium types were treated medically and of 850 cases the mortality was 4 7%, with an operative mortality of 11.5%. The type of disease in Hamburg seems to have become more severe. Since March, 1904, the author has practiced the early operation, in all acute cases operative intervention being attempted within 12 48 hours of the onset. Only in the cases in which the symptoms improve within 12-24 hours should a conservative aspect be considered. Patients first seen after 48 hours should be treated with ice and opium, unless the stormy course absolutely necessitates intervention. Abscesses should be opened as soon as diagnosed but the appendix not removed if adhesions have to be broken up to accomplish this end. After about six weeks an appendicectomy should be performed and the ventral hernia also cured.

Etiology and Pathology of Hepatic Cirrhosis in Infants.

Spilverini (Rivista di Clinica Pediatrica) draws attention to the common belief that hepatic cirrhosis in infants is comparatively rare, much more so than in adults. The author's observation has led him to believe that such cases are much more common than is generally believed. The liver of an infant has a different physiological attitude from that of an adult, and the functional reactions in the presence of morbific agents have different characters. If the forms of hepatic cirrhosis are difficult of diagnosis during life the author thinks it desirable to publish such cases. The principal causes of the disease in infants are (1) Infective syphilis, tuberculosis, malaria, biliary infection. (2) Toxic—alcohol, dyspepsia, splenomegally. (3) Mechanical—circulatory. The most frequent variety is of syphilitic origin. The malarial form is uncommon, as is that of circulatory origin. It has been supposed that the alcoholic form was rare, on account of the tender age of the child. There is reason to believe that this is not the case, since it is found that among the poorer Italians, especially of the Roman Campagna, it is the custom to give children wine as a daily food, and they even drink it as a beverage at night when thirsty. The author describes two such cases, one of which recovered slowly when the alcohol was stopped, while the other, a baby of 18 months, died. The dyspeptic form is also rare. The chief reason of this is the resistance of the child's system to the poisons from the intestine. A third case was one of hypertrophic cirrhosis, with chronic icterus. Another occurred in a child afflicted with a very extensive eczema, which the author believes to have been the cause of a toxo-infective cirrhosis. The liver had a

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The Treatment of Intestinal Paresis.

Dahlgren (Zentralblatt fur Chirurgie) says that in cases of general peritonitis in which eventration is necessary he has found the following procedure very useful. The middle portion of the intestine is brought over to the left side and an incision from 1 to 1½ cm. long is made into it, the edges of the cut being kept open by artery clamps. Beginning on either side of this the intestinal contents are "milked" out either with the finger or by means of a special double roller of the author's invention. The process is continued until the volume of the intestines has been reduced sufficiently to permit of their easy return to the abnormal cavity. By this manipulation the danger of postoperative atony is much reduced and the patient's condition is also greatly improved by having a large quantity of noxious material removed from the system. The author also commends milligram doses of atropine given hypodermically for postoperative atony. Several cases are described in which the paretic condition of the gut was relieved by this treatment and even though from five to seven milligrams of the drug were administered in the course of from twelve to fifteen hours no symptoms of poisoning were produced.

Malarial Infection Presenting Symptoms of Multiple Neuritis.

Price (American Medicine) reports a case in a girl, aged 8, who had multiple neuritis of 18 months' duration, following malarial infection. The symptoms were pain, paresthesias, tremor of hands, diminished power in all extremities, particularly marked in the flexors of the ankles, and giving the characteristic "foot drop." There was also a slight intermittent rise of temperature. The malarial parasite, of the estivoautumnal variety, was found in the blood. This corresponds to the findings of Spiller and other observers, in various forms of malaria of the nervous system. Recovery followed the administration of quinine.

Dissemination of typhoid fever by the means of butter would hardly be thought of, but a German physician has proved in a very convincing manner that it is possible. He showed that when butter is made from milk infected with typhoid bacilli, the bacilli pass from the milk into the cream and thence into the butter. In one of the three decisive experiments infected water was used to wash out the milk cans, and butter which was made from pure milk later taken from the cans which had been flushed with the infected water, contained the typhoid germs.

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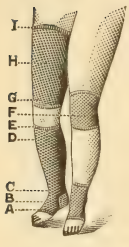

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Etiology of Eclampsia.

Liepman (Munch. med. Woch.) says that normal placenta, when injected intraperitoneally into rabbits is usually not followed by any reaction, but if the placenta of an eclamptic patient is substituted the animals almost always die. Very soon after injection, the respirations become hurried; death sets in with the animals in the sitting position, and usually without the appearance of convulsions. It makes no difference if the solution employed is recent or several days old. It is very likely that the eclamptic poison comes from the placenta, the metabolism of which is altered in some unknown way. If it is possible to immunize rabbits against this toxin the serum treatment of eclampsia may yet prove successful.

Cold Affusion in Delirium Tremens.

Sir Wm. Broadbrent (Brit. Med. Jour.) draws attention to the value of cold affusion in delirium tremens. The modus operandi is as follows:—The patient is stripped and placed on a blanket over a waterproof sheet. Then a large bath-sponge dripping with ice-cold water is dashed violently and repeatedly on the face, neck, chest and body. After rubbing the patient dry with a rough towel the process is repeated a second and a third time. The patient is now placed on his face and the sponge dashed on the back of the head and down the whole length of the spine two or three times, vigorous friction with a bath-towel being practised between the cold-water "attacks." The result is prompt sleep, from which the patient wakes comfortable and refreshed.

Appendicitis and Typhoid Fever.

Cumston (American Journal of the Medical Sciences) considers at length the differential diagnosis between these two conditions, placing the elements under four heads: 1. Analysis of clinical symptoms. 2. Examination of the urine. 3. Examination of the blood. 4. Widal's test. No one clinical symptom is pathognomonic. Albuminuria is more frequent and pronounced in the beginning, in typhoid fever. Other than the clinical symptoms, Widal's test is the most reliable point. Regarding the association of the two diseases, the author summarizes his statements by saying that every time appendicitis exists, either alone

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Controlling a Gough Without Drugs.

From Saranac Lake, says the Medical News, whence come so many beneficent inspirations relating to the treatment of consumption, we are advised that causes of cough other than the structural ones (tuberculosis, pleurisy, etc.) are: smoking, irritation of cold sheets at night, exposure to sudden temperature changes, wind, dust, exertion, rapid walking, talking, laughing, etc. The open-air cure is the first and best remedy to be tried—faithfully. Sometimes the cough is due to nervousness and can be largely controlled. Many simple devices may be tried: the reclining position, the avoidance of talking and of hearty laughter, sips of cold water with a little lemon or orange juice, tablets of iceland moss, slippery elm or glycerin; very slow deep breaths, holding the breath, etc. The advertised cough remedies have often a deleterious effect upon the stomach.

or associated with typhoid, an operation is indicated. Interference is contraindicated only in cases of simple typhoid, or one associated with symptoms arising from the appendix, but which are so slight that they cannot be considered as due to a true case of appendicitis.

A Review of One Thousand Operations for Gallstone Disease, with Special Reference to the Mortality.

Wm. J. and Charles H. Mayo (The American Journal of the Medical Sciences) in an interesting paper on this subject, state that from June 24, 1891, to Dec. 1, 1904, they had made 1,000 operations upon the gall bladder and bile passages, with 50 deaths (5%). In the benign series there were 960 cases with 4.27% deaths. For malignant disease, 9 deaths in 40 operations give a mortality slightly in excess of 22%. Of the common duct operations there were 137 benign, with 16 deaths, 11.7%. This gives a heavy mortality, but, as already pointed out, it is really a death-rate of operation and disease, and means that 7% failed to recover from the direct results of the operation, that is, died within a few days; while 4% recovered from the operation, but did not regain sufficient strength to leave the hospital. Many cases operated were in desperate condition from prolonged icterus, anemia, etc. No cases were refused operation if they so elected after a fair statement of the facts. Operations for malignant disease are discouraging: 40 operations, with 9 deaths in the hospital, and of those that recovered comparatively few received sufficient palliation to repay the immediate risk, suffering and expense. Two cases however, can be considered favorable as to cure; both were instances of early carcinoma of the gall bladder. In a few patients a thick-walled and functionally useless gall bladder was removed, and examination showed malignant involvement, and in the two cases referred to no return had taken place after more than two years. The authors state that next to malignancy and acute perforative infections of the gall bladder and pancreas, the most serious thing that can happen in gallstone disease is involvement of the common duct of the liver. "It can be fairly stated," write the authors, "that the average mortality of operations for diseases confined to the gall bladder is not greater than for appendicitis in patients of the same age and condition of health. Gallstone disease is most frequent in people of advanced years—often obese and not infrequently the victim of some degenerative lesion of vital organs. One cannot directly contrast such cases with disease of the appendix, which is by far more common in younger and more robust subjects." They state that the most common cause of death where the gall bladder alone was involved has been a descending infection of the common and hepatic ducts. They further state, "Unfortunately, the majority of common duct patients have either never had an intermission or have passed beyond it, and operation is no longer an election as to time, but a necessity, and, no matter how desperate, must be done to save life. In some cases the infection is the more prominent feature, giving typical ague symptoms, Sudden chills, with high temperature, followed by rapid decline, and a little temporary increase in jaundice and attended with moderate pain and often nausea are pathognomon. In others there is little infection, but such a degree of bile stasis in the ducts as to invite infection after any kind of operation. Some individuals are almost sure to die. Patients with extreme jaundice and subcutaneous hemorrhage will nearly always bleed to death from capillary oozing. If purpuric spots exist with jaundice, we keep the subjects under treatment until the blood will at least remain in the proper channels. Another class of cases who have in our experience all died, and about whom we are not always able to foretell the conditions previous to operation, are those patients with obstructive jaundice in whom no trace of bile is to be found in the bile passages, the common and hepatic ducts being filled with clear fluid. The liver has been put out of action. The patient, while extremely feeble, may be up and about. The jaundice is extreme, but is not necessarily accompanied by leaky blood vessels and subcutaneous hemorrhages. We have had four of these cases, and all died within four days. In two cases a little bile appeared in the drainage at the end of twenty-four hours, but in none did liver action become re-established." "In the 1,000 operations, 14.6% involved the common duct."

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Chronic Dysentery.

MacDonald (N. Y. and Phila. Medical Jour.) reports two cases of inveterate dysentery which had been previously treated by high enemata, antiseptics, astringents and opiates by the mouth and careful regulation of diet. This treatment had been continued for months in one case and three years in the other. These patients were operated, a colostomy opening being formed and through this the bowels were flushed twice daily with two gallons of 1-1000 solution of potassium permanganate. Both cases recovered. The treating of these inveterate cases of dysentery by through-and-through irrigations by means of an artificial opening made into the cecum, if conclusions can be drawn from scattered cases which have been puhlished, is giving better results than any other treatment so far employed in these cases.

Intramuscular Injections of Insoluble Preparations of Mercury in Syphilis.

Klotz (Medical News) states that this is a common treatment in Europe, the metallic mercury in oil, neutral salicylate, and calomel having been found the best. Inunctions are objectionable on account of uncleanliness, exposure, and tendency to salivation. The writer has made 2,500 injections on 204 patients. The usual dose was 10 cg. ($1\frac{1}{2}$ gr.) at intervals of a week for ten weeks, followed by an intermission of several months, four to six series being given up to about the end of the second year. Iodides or tonics in the intervals prepare the patient for a renewal. Unusual and precocious malignant cases are the best field for a critical test of the treatment. In tertiary lesions some of the patients have given iodin with the mercury, but the author is discarding iodin more and more, the lesions reappearing when iodin is used, while they are permanently cured by the mercury injections. If the injection is properly made, there is no pain at the time, nor flush about the puncture, nor inflammation of the skin. If the deposit is near a nerve or vessel, pain may extend along the extremity for several hours. The lower portion of the nates must be avoided in those having a sitting occupation. Only four abscesses and four embolisms have occurred in 2,500 cases, and there have been no kidney complications.

The Passage of a Pill.

Sicard and Infroit have traced the passage of a pill through the digestive tract. The pill was made of colloid matter and filled with bismuth; so that when the canal was illumined by the Roentgen rays, its passage could be seen through the body walls. It was given on an empty stomach. It was found that for half an hour the pill remained in the fundus of the stomach, eight hours after that is was seen in the cecam, where it remained from four to six hours. It remained in the transverse colon from ten three hours and in the descending colon from three to four hours. Between the twentieth and twenty-fourth hour it was seen in the sigmoid flexure and after that it was expelled with the feces.

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Interlobar Empyema.

Broadbent, in the London Practitioner, discusses the diagnosis of this form of empyema, and gives details of two cases in which the diagnosis was verified by operation. He says that he has seen several cases in which he had formed the opinion that this condition existed, but only two in which the diagnosis was verified by operation. The author has never seen one in the post-mortem room, but before proving fatal the pus would probably make its way into the general pleural cavity. In several cases in which he had made this diagnosis the pus has burst into a bronchus; in fact, this accident is more likely to occur in the interlobar than in the ordinary form of empyema. The details of the two cases verified by operation were as follows:—Case I.—A man, aged 60, tall and muscular, had an attack of influenza, attended by some inflammatory affection of an indefinite character of the right lung. He recovered, but a few weeks later had a relapse with return of trouble in the right lung. Very soon the general symptoms pointed to empyema, but the dulness on percussion over the lower part of the chest was but slight, and exploration at various points was negative. A correct diagnosis was ultimately made from the fact that the physical signs, slight impairment of resonance, and deficient entry of air varied from day to day, and more particularly that they shifted from the upper to the lower lobe, and back from the lower to the upper, in a remarkable way. It was inferred that there was an empyema between the lobes, which pressed upwards or downwards according to the position in which the patient lay. Careful search was therefore made along the course of the two fissures between the middle and lower and middle and upper lobes, but no definite dulness could be made out. Dulness was, however, found behind, above the spine of the scapula, and from this point towards the axilla. At length dulness could be recognized near the apex of the axilla, and a surgeon was called in to operate. A trocar was passed upwards, inwards, and slightly backwards in the dull area; pus was found, a portion of rib resected, and more than half a pint of pus escaped. The progress of the case was very satisfactory. The other case was in a boy, aged 10. The boy passed through an ordinary attack of acute pneumonia on the left side, which ended by crisis on the ninth day. The temperature remained normal for one day and then assumed a suppuration type. The physical signs now began to vary from day to day as regards auscultation, but there was a steady displacement of the heart to the right. Three negative attempts at exploration were made—one in the eighth left interspace in the anterior axillary line, one in the mid-axilla, and one just below the inferior angle of the scapula. When the first attempt was made there was absolute dulness of the whole left base up to the angle of the scapula, complete absence of local fremitus, and marked agophony. This was on December 26th; the other two punctures were made on January 10th. On the 11th a marked area of resonance was noted in the left base, especially in front, and the left apex was absolutely dull, with no breath sounds or vocal fremitus or resonance, down to the fourth rib. On the 12th an exploratory puncture was made high up in the anterior axillary line, just below the lower border of the pectoralis major, with the arm held out at right angles to the body. Pus was immediately struck, and about one pint drawn off. An incision was made and a tube inserted. He ultimately made a complete recovery. The fluctuations in the physical signs sufficiently resembled those described in the first case to warrant the diagnosis. The amount of pus was so large that both upper and lower lobes were compressed.

The Cause, Prevention, and Treatment of Perityphlitic Attacks.

F. Karewski (Deutsche medizinische Wochenschrift) concludes his paper on perityhlitis. A number of illustrations are given, showing various pathologic conditions. He states that all the disease conditions of the appendix begin as a simple catarrh such as is met with in enteritis: hyperaemia, swelling, round-cell infiltration, and haemorrhage into the tissue.

Appendicitis therefore is histogenetically an enteritis. Perityphlitis is but the result of an acute increase of this process. He concludes that appendicitis is but a sign of enteritis and the perityphlitic attack nothing more or less than a peritonitis arising from the inflammatory condition of the appendix.

From this stand point he says every enteritis should be regarded as a serious affection, and that children with dyspepsia accompanied by abdominal pain should be put to bed. A second point of importance is habitual constipation in children and adults. Digestive disturbances with abdominal pain require careful attention.

That pain may be felt in any part of the abdomen is due to the nerve supply from the plexus mesariacus which supplies the appendix. Pain in the stomach region may indicate the onset of an attack. Lymphangeitis of the mesentery may be misleading. Its propagation in the lumbar and iliac regions may cause lumbago and sciatica; es-

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pecially is this true of the chronic types of appendicitis.

Everybody with chronic painful bowel disturbance, abdominal colic, so-called nervous vomiting, in whom a definite cause is not to be found, should be considered a sufferer with appendicitis.

Localized pain and pressure and distention in the painful area are the points on which to base the diagnosis. The treatment depends on the case. If appendicular irritation only is present conservative treatment is advised also rest, dietetic and medicinal means. All exercise must be avoided as long as spontaneous or pressure, pain is present. If, after six weeks' treatment, the trouble has not subsided, or having subsided has returned, appendicectomy is indicated. The perityphlitic attack is to be treated by surgical operation. The perityphlitic attack is characterized by fever, rapid pulse, vomiting increasing pain, and more or less collapse.

In closing the following points are mentioned:

(1) Enterocolitis is the usual cause of appendicitis.

(2) Consequently every bowel inflammation is to be considered as a serious affection and carefully treated.

(3) The physical dietetic-medicinal therapy has its limitations.

(4) The perityphlitic attack is to be treated by operation without delay.

The Action of Bichloride Injections on the Urethral Mucous Membrane, and Its Dangers.

Asch (Munchener medizinische Woch.) says that the practice of self treatment of gonorrhea is still very prevalent in spite of the wide-spread efforts to disseminate a knowledge of the gravity of the condition. Bichloride of mercury is a widely used popular remedy, but its unsuitability for urethral injection is shown by five cases observed by the author. The antiseptic was used in a strength of from 1:1,000 to 1:500, and gave rise to exceedingly severe symptoms comprising swelling of the penis, a discharge of bloody serum, severe pain, and urinary obstruction due to the formation of localized patches of induration of the urethral mucous membrane giving rise to acute strictures. The author was able to confirm the presence of these latter formations by endoscopy in a case that came under his observation two days after the injection had been made. The treatment usually relieves the acute symptoms in a few days, and includes local applications of lead acetate, warm sitz baths, rest in bed, and the administration of a urinary antiseptic to prevent ascending infection of the urinary tract. Catheterization should be avoided if possible during the first days, but later on the strictures must be treated by gradual dilatation. The urethroscope may also be used in order to make local applications of iodine directly to the infiltrated areas. In conclusion, the author strongly urges the abandonment of bichloride as a urethral application in any strength, and says that oxycyanate of mercury is extremely effective as a germicide without having any irritating properties, even at a strength of 1:2,000 to 1:1,000.

Gelatine in Typhoid Fever.

Richter (Medical Brief) mentions gelatine as being a great saver of albumin, which is wasted by the fever in typhoid to an alarming extent. Gelatine taken alone, to the exclusion of carbohydrates and fat, the author says, can not sustain life, but should be partaken of together with the other constituents of normal food. The author gives the following recipe for obtaining perfectly pure gelatine:

Take a number of calves' feet or, better yet, the knuckle-bones of cattle, clean them most carefully, chop them into pieces the size of a walnut, put them in a kettle with fresh water and bring them to a slow boiling. After about fifteen minutes pour this water away and add fresh water. Boil slowly for about five hours, adding enough water to keep the bones covered. Then strain through fine muslin. After the liquid has cooled enough add the white of two or more eggs, and again heat until the liquid begins to boil. The egg-white will coagulate. Put in a place where it will cool slowly, being careful, however, not to let it turn sour. A trace of salicylic acid will prevent it. All impurities will gradually settle down and a clear liquid remain on top. This is a pure solution of gelatine, which on cooling forms a stiff jelly. As a most acceptable and beneficial food for the typhoid patient it may be added to broth or milk, or flavored with lemon, or orange, or grape juice, etc. It is also excellent with cream or as a wine jelly (with sherry or port wine).

The Role of Alimentation in Experimental Tuberculosis.

Richet (Gazette des Hopitaux Civils et Militaires) has recently communicated to the Academy the result of the interesting experiments that he has recently made on dogs which have proved that raw meat has a very favorable influence in cases of tuberculosis, while cooked meat, on the contrary, has very unfavorable effects. In a series of dogs which he had inoculated with tuberculosis, the food given to one set was cooked meat: to another was given raw meat, and to still others was given boiled meat with

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rice. All of the dogs that were fed exclusively on the baked meat were dead at the end of a month; only one survived, and he had taken raw meat after a few days of the other diet. All of the dogs that had been fed with raw meat, had lived. A few dogs had been subjected to several days of fasting, they did not die, while all of the dogs which had eaten cooked meat for the same length of time had succumbed. Cooked meat produced an intoxication which completely took away the appetite in consequence of which the animals became weak and died. The experimenter simply presents the result of his researches without drawing any conclusion applicable to the human subject.

Ideal Method of Removing the Vermiform Appendix.

Kelly (American Medicine) in an interesting paper on this subject, states that there are three principal objects to be attained in the technique of removal of the veriform appendix, namely: "(1) To remove the appendix without contaminating the surrounding peritoneum with any of the bacterial flora, which are often virulently infectious and always abound on its mucous surface; (2) to treat the mucosa in such a manner as to prevent any contamination while closing the opening into the bowel made by the amputation; and (3) to dispose of the stump so as to avoid any risk of infection after the closure." The author's method of operation is as follows: "The appendix is exposed, and the mesappendix is tied off. A circular suture of fine silk is then laid around its base, about a centimeter distant, but not drawn up. The appendix is then grasped at its base with the forceps and crushed' while just beyond the forceps (distally) it is seized with an ordinary artery forceps to prevent the escape of its contents. Paquelin's cautery is now used to amputate the appendix between the two forceps, when it is laid aside in the grasp of the artery forceps. The crushing forceps, which is now to be converted into a cooking, sterilizing, sealing iron, is carefully isolated by tucking dry gauze under each blade, so as to lift the end of the forceps up on a cone, away from all contact with the cecum. The next step, which is the most important one, is to keep the red-hot point of the cautery slowly travelling up and down the groove in the crushing forceps for from forty to sixty seconds, so as to burn off every vestige of the stump, and at the same time to heat the forceps so thoroughly that the narrow ribbon of crushed appendix in its grasp becomes converted into a translucent gristle-like substance, in which the lumen of the appendix is completely destroyed. The lumen is so effectually obliterated that it never gapes. The final step is the tightening of the purse-string suture, and the inversion of the cooked base, after which the serosa is carefully united over the whole with another row of fine silk suture." The author considers the advantages of his method to be: "Its perfect simplicity. There is at no time any exposure of the infected mucosa. The stump is not ligated or bruised, and thus left as a culture medium for whatever organisms may have lain in it. The appendix is amputated with the cautery and the proximal portion is sterilized and effectively sealed. The inverting sutures are then applied over an area as free from contamination as the rest of the peritoneal cavity."

Senile Anemia.

Kurpjweit (Deutsch. Arch. f. klin. Med.) says that from the history of two cases quoted in full, it can be seen that the characteristic symptoms are progressive emaciation and pallor, coupled with high temperature of intermittent or continuous type. The spleen is enlarged; the stomach contents lack free acid, and the urine generally contains urobilin and kidney elements. The number of red cells is in proportion to the percentage of hemoglobin, but poikilocytosis and other changes are slight or absent altogether. The leucocytes are markedly reduced in number and the lymphocytes usually form the most abundant elements. At autopsy, subserous hemorrhages are often found, together with cloudy swelling of the heart muscle and hemosiderosis of the internal organs. The bone-marrow shows a marked atrophy with occasional hemorrhages and necroses, such as are not seen with typical pernicious anemia. The author classifies these forms of anemia among a plastic anemia, since the absence of nucleated reds, the diminution of leucocytes and the autopsy findings speak for an entire absence of regenerative power on the part of the bone-marrow.

"Much learned consideration has been adduced," says a writer in a recent issue of the New York Medical Journal, "to show from the internal evidences of Shakespeare's plays that he was a lawyer, a physician, and several other things. The following quotation from "The Taming of the Shrew," proves that the immortal William was certainly informed about medical matters:

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General Septic Peritonitis in Typhoid Fever Without Evidence of Perforation of the Bowel.

Watson (London Lancet) reports the case of a boy of nine years who on the tenth day of typhoid developed the general features characteristic of septic peritonitis. Abdominal incision was made and the abdomen cleaned out, the operation lasting only twenty minutes. Death came seven hours later. Autopsy revealed no perforation of the bowel and that none had taken place in the case seems probable on account of (1) the absence of free gas or intestinal extravasation; (2) the nature of the pus (and the probable absence of bacillus coli); (3) the condition of the ulcers and the peritoneal coat. It seems not unlikely that this was a case of pure typhoid peritonitis, and had it been seen earlier might have been treated successfully.

Chronic Acetanilid Poisoning.

Stewart (Association of American Surgeons) reports a case that for a time was considered to be pernicious anemia. It had all the clinical symptoms of that disease, including the pallor with yellowish tinge the tired feelings, and the digestive disturbances, as well as all of the blood symptoms. There were many different forms of red blood cells, small and large, and there were megaloblasts and normoblasts, and there was a difference in the color-staining properties of the red cells. After a time it was found that the patient had been for many months taking some forty grains of acetanilid per day. As soon as the drug was stopped improvement set in and recovery took place. It is evident that the free use of these pain-dispelling remedies for headache and other vague neuralgic conditions may produce serious disturbances of the blood equilibrium.

The health registrar was called to account for delaying returns. His letter of explanation follows:

"I have been more or less sick for three weeks. My deputy was also sick. A big boy—future congressman—was born to us March first, and passed some colicky nights, that kept us awake. During the event just related, our other children were neglected by the housemaid and had the croup. Under the relaxed vigilance, the cook went to a party, and stood so long at the gate that she fell ill with bronchitis. My wife's mother was taken conveniently ill about this time. Then the chore boy broke down under the added burden. Even our faithful watch-dog is now indisposed. Together with village election, county and State conventions, and some other professional and official duties, the report slipped us, but trust that it will not occur thusly again."

Miscellaneous.

University of Louisville.

The medical department of the University of Louisville is the second oldest west of the Alleghenies. On October 2nd, 1905, the 60th regular annual session will begin. Four 7-month sessions are required for graduation. The instruction is given in the most practical manner The abundant clinical material furnished by the hospitals gives the student a good opportunity to obtain a thoroughly practical clinical experience which is the prime factor in preparing for the practice of medicine. The laboratories are well equipped with the latest appliances. Suizzes are held systematically and regularly throughout the course. The requirements of the State board of medical examiners of Kentucky now demand that an applicant must have had a thorough training, both theoretical and practical. The course given in the University meets these demands in every respect.

University of Pennsylvania.

The department of medicine was founded in 1765. The 140th session begins September 25th, 1905. The course of four years is practical in every respect. The University Hospital with its 350 beds furnishes abundant clinical material which is used exclusively for the students of this university. Further clinical opportunities are furnished by the Philadelphia Hospital containing 1000 patients. The final year is spent almost entirely in the hospital. The forenoon is spent in the wards where the seniors are called upon to perform all the duties of a resident physician, so that when his course is completed he has had virtually one year's hospital experience. Eighty per cent. of the last graduating class were offered appointments within a month after graduation. Taking into consideration both the practical and theoretical instruction given at this university, it may be considered one of the foremost medical courses given this side of the Atlantic.

The International Anatomical Congress at Geneva.

The first International Congress of Anatomists will be held, writes Science, at Geneva, Switzerland, on the 7th and 10th of August. The following national societies are to participate in this congress: The Anatomical Society of Great Britain, the Anatomische Gesellschaft, the Association des Anatomistes, the Association of American Anatomists and the Unione Zoologica Italiana. The organization of the congress has been entrusted to a committee representing these societies, and consisting of Professors Minot, Nicholas, Romiti, Symington and Waldeyer. The presidents thus far named are Professors Sabatier, of Montpellier; Professor Romiti, of Pisa, and Professor Minot, of Harvard. The vice-presidents are Professor Bugnion, of Lausanne; Professor Valenti, of Bologna, and Professor Carl Huber, of Ann Arbor. A general circular is in preparation. which will shortly be distributed to all members of the various societies taking part in the congress, and to such other persons as may request to have it sent to them. The congress owes its successful initiation largely to the zealous devotion of Professor Nicholas, of the University of Nancy, and inquiries as to further details on the part of those interested may be addressed to him.

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I tried your Resinol Ointment on myself. I had suffered from pruritus ani, or marginal eczema, for 25 years, and had tried many remedies without any relief, until Resinol proved soothing and stopped the itching instantly.—J. T. HICKMAN, M. D., Mt. Jackson, Virginia.

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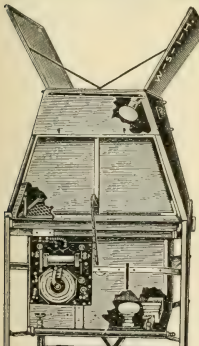

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The p tient in this case was a woman 82 years old. Her trouble was of several years' standing, during which time she had been unsuccessfully treated for various forms of gastro-intestinal affections. I found that there was a great deal of pain, at times very acute, in the region of the duodenum and a careful examination of the daily stools showed a number of black crusts which, with other symptoms, indicated an ulcer. As there was much acid fermentation and gastric disturbance, I thought the use of Glyco-Thymoline would be effective and began with tablespoonful doses every three hours. The results were wonderful. Not only were the gastric conditions corrected speedily, but the pain and soreness was lessened in the duodenal tract and the quantity of black crusts in the stools greatly lessened. I had the patient under the care of a trained nurse and told her to keep the Glyco-Thymoline treatment up and closely watch the stools and report to me daily. This was done and the improvement steadily continued until, after some three weeks' treatment, there was no pain nor soreness and no trace of the crusts. Her appetite had returned and she could digest and assimilate her food without any distress, something she had been unable to do for a number of years. After another week or so I found that every indication pointed to a cure and discontinued the treatment. That was over a year ago. She has not had the slightest return of the bad symptoms and her general condition is remarkably good for a woman of her age. She could not have lived six monts had her trouble continued. As it is, she apparently has a number of years of life before her and as Glyco-Thymoline alone was used, the inference that it saved her life is not over strong. I cannot say too much in its praise.—A. F. Foye, M. D., Washington, D. C.

Creosote in Tuberculosis.

Tuberculosis is curable. Medical practice gives constant evidence of this, and further, autopsies performed in the hospitals and at the morgue have shown healed tuberculous lesions. Curable in the adult, it yields more readily to treatment in childhood, and the chances for recovery are greater where the illness is of recent date. Hence the absolute necessity for treatment upon appearance of the first symptoms, viz., persistent cough, fever, and loss of flesh. After the repeated failures of Koch's lymph and of all antituberculous serums, the direct destruction of the bacillus in the organism was abandoned; it was proved that this bacillus was only active in favorable media, in organisms weakened by repeated attacks of bronchitis, or suffering from a severe anemia, and physicians gained a clearer idea of the correct treatment of tuberculosis. The object sf the treatment may be defined in these terms: to render the organism proof against the invasion of the bacillus and to enable it to repair its waste, restrict tuberculous lesions and heal them. Such were the results looked for by Mr. Pautauberge, chemist of Paris, when he composed his solution of chlorhydro-phosphate of lime with creosote. Millions of testimonials signed by the most eminent practitioners prove that Pautauberge's solution brings into effect all these rational methods of treating tuberculosis. It has been noticed that tuberculous cachexia is the result of a demineralization of the organism, and in particular of an excessive elimination of phosphates. By means of its chlorhydro-phosphate of lime, a perfectly assimilated sale, Pautauberge's solution compensates for the loss of these phosphates which form part of all the tissues and liquids of the human body. It may be said that chlorhydro-phosphate is a necessity for consumptives. By means of creosote, Pautauberge's solution restricts the inflammatory area; it acts, according to Prof. Jaccoud, on the tuberculous lesions and causes their cure by sclerosis. This progressive evolution of the lesions is manifested by the expectoration, which gradually loses its suppuration and finally disappears. Following the advice of Prof. Bouchard and Dr. Gimbert (of Cannes) Mr. Pautauberge was careful to exhibit his creosote in the form of a strongly diluted solution, an indispensable condition for its toleration by the digestive tracts and allowing for a lengthy treatment. It is for these reasons that for twenty years Pautauberge solution has conquered and kept the favor of the medical profession, and has become classic in the treatment of tuberculosis. But that is not the limit of its usefulness. It is the chosen remedy of all having a tendency to consumption, for delicate children and those subject to colds, as it builds up the constitution; for anemic

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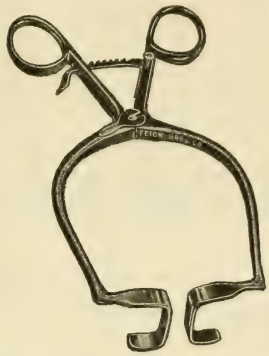

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At the closing of the Association of S. A. L Surgeons at Old Point Comfort, Va., officers were elected as follows: President, Dr. G. A. Neuffer, of Asheville, N. C.; first vice president, Dr. W. F. Monroe, of Sanford, Fla.; second vice president, Dr. G. G. Holliday, of Portsmouth, Va.; third vice president, Dr. W. Palmer, of Ailey, Ga.; chairman executive committee, Dr. Southgate Leigh, of Norfolk. The association meets next year in Savannah.

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Professor Johannes v. Mikulicz-radeckl.

Professor Mikulicz died in Breslau on June 14, from cancer of the stomach. In December, 1904, he discovered a tumor in the region of the stomach which was operated upon with the result that the disease was shown to be much more wide-spread than was at first apparent, and that nothing could be done to relieve the situation. In spite of the serious character of his disease, he again took up his work in February, but was obliged to seek rest and recuperation soon after, and giving up with much regret his plan to attend the Orthopedic and Surgical Congress in the spring at Berlin, he died in June, about six months after the discovery of his malady.

He was born on the sixteenth of May, 1850, in Czernowitz, and undertook the study of medicine in Vienna. During the early period of his study he shared his time between medicine and the piano. His final decision to devote himself to medicine rather than to music was made late in his student career. After three and a half years' attendance at Billroth's clinic he became his assistant. In 1880 he became privatdocent in surgery, and in his thirty-second year he was called to Krakau as ordinary professor of surgery. At the end of five years he was called to Konigsberg, and again after three years to Halle. After a few months' activity in this position he became professor at Breslau where he remained up to the time of his death, although receiving flattering offers from other universities.

Professor Mikulicz will be well known for his work on a great variety of surgical subjects and for his comprehensive knowledge of surgery and its allied branches. Among his most notable contributions are his work on genu valgum, the surgery of the digestive tract, the operative treatment of Graves' disease and the whole subject of the treatment of wounds, and asepsis in its broadest phases. His pioneer work also in the development of modern gynecology is worthy of note. He consistently opposed the tendency to divide surgery into smaller specialties and preserved the organization of his clinic on the broadest plan. As a teacher he was inspiring to his students, among whom are numbered many surgeons who have since attained positions of distinction. His published work includes several hundred titles, and his membership in for-

The Charlotte Medical Journal.

Vol. XXVII. CHARLOTTE, N. C., SEPTEMBER, 1905. No. 3

Report of a Case of Chronic Interstitial Pancreatitis.

By Edward Jenner Wood, S.B., M.D., Wilmington, N. C.

C. H., negro, age 21, height 6 ft. 3 in., weight 160 pounds. By occupation a blacksmith; the greater portion of his work being the shoeing of horses.

Family History.—His mother died of phthisis when he was seven years old. His father is living and in good health. Two brothers are dead: one in infancy; the other from tuberculosis of the third and fourth cervical vertebrae following an injury. One sister died at five years of an unknown cause.

Previous Medical History.—At various times he has had malaria. At eight years he had some chronic eruptive disease, the exact nature of which cannot be ascertained. It was probably not specific.

Two years ago while shoeing a horse he was kicked in the epigastrium.

In December, 1903, he had a severe attack of what he says was influenza and which lasted for several weeks. After a painstaking investigation into his family and previous medical history, together with a minute physical examination, I was convinced of an absence of both tuberculosis and syphilis, two diseases which I seldom find absent in any chronic condition among negroes. The presence or the suspicion of one or both of these diseases is, I think, a serious obstacle in the way of a more careful investigation of disease among the negroes in our Southern hospitals. We are often too prone to ascribe symptoms and conditions to one or the other of them. In this instance, however, I was morally certain of an absence of any tubercular or syphilitic taint. The patient had never had any venereal disease.

History of the Present Condition.—In February, 1903, he consulted me, complaining of weakness, orthopnoea, and oedema of the whole body. He said he had never recovered from the influenza. The oedema had begun in his face and soon appeared in his feet and legs, and later in his scrotum. Finally the abdominal wall became oedematous. At this time there was no ascites.

Physical Examination.—When first examined the following notes were made: The heart enlarged to the right and the apex beat palpated in the sixth interspace, about one inch outside the mid-clavicular line. There were no murmurs. At times the cardiac action was considerably lacking in force. Again the heart's action would be tumultuous while the radial pulse was almost imperceptible.

The liver was enlarged downward, two finger-breadths below the costal margin. The spleen was enlarged and palpable. Examination of the blood showed 70% hemoglobin; 3500,000 red blood corpuscles; no leucocytosis; no malarial organisms. The urine was free from all trace of sugar or albumen and casts. The specific gravity was 1018. The feces showed no signs of fat or fleshy particles. Ankylostomiasis could not be demonstrated, though suspected, and several doses of thymol were given.

The patient was put to bed and kept on a liquid diet. Instead of decreasing as we expected the oedema gradually increased. Most unusual action of the heart was noted at this time. The rate decreased to forty a minute and for ten days there was a marked irregularity of the pulse, the beats occurring in series of four each with a pause between. There seemed to be some disturbance of the coordination of the heart, the right and left heart failing to act together. These symptoms were thought to be due to pressure. There was nothing other than the rate to suggest the Stokes-Adams syndrome. The patient was admitted to the James Walker Memorial Hospital on May 19th, with the above state of things unimproved. Daily examinations revealed considerable variability of the apex beat. At one time it would reach the mid-axillary line, while again it would be found two inches or more within. At times there was a marked thrill over the apex. At this time, June, 1904, the patient complained chiefly of pain and distress in the epigastrium, hiccough, cough which was most obstinate, almost constant nausea and vomiting. Orthopnoea was distressing. The temderature was almost constantly subnormal. The upper abdomen, especially to the left of the midline was so sensitive to pressure and even touch, that it could not be palpated. The pain in the upper abdomen was often intense and quite frequently it was located higher up over the manubrium.

June 20, 1904: All the above symptoms persisted and were aggravated. The cough and orthopnoea were most distressing. It was almost impossible for the patient even to assume the recumbent posture. At this time a distension of the upper abdomen appeared which increased rapidly and which was strictly limited to the upper half, having the characteristics of a large cyst. The patient complained of great epigastric pain and tenderness. He could retain absolutely

nothing. A gastric analysis had revealed nothing. At this time the liver was markedly enlarged downward. The stomach was distended and pushed forward so that it was easily mapped out on the abdominal wall by inspection. It was evident that there was free fluid in the abdominal cavity, but it was not generally distributed. A carefulexamination led me to the conclusion, which seems to have been correct, that the fluid was largely restricted to the lesser peritoneal cavity. The only explanation we could give for this condition was that in the rapid accumulation of fluid it had caused a sagging, so that the edges of the foramen of Winslow had become opposed and had thereby shut off the communication between the lesser and the greater peritoneal cavities.

An exploratory laparotomy was done by Dr. Burbank under cocaine anaesthesia. The parietal peritonium was found to be greatly thickened. Two litres of clear amber colored fluid were removed. The liver was greatly enlarged and had the characteristic nutmeg appearance. The patient was greatly relieved by the removal of the fluid. This relief was only temporary, coma followed by death occurring soon afterward.

An autopsy was immediately done and the following conditions were noted:

Lungs normal.

Heart much enlarged with dilatation of the cavities. The muscle was pale and friable. The valves were normal. Microscopic examination showed that the degenerative changes had reached an advanced state. The muscle fibres were frequently fragmented and segmented.

Liver was greatly enlarged; it was smooth and glistening in appearance with the "nutmeg" mottling well marked. Microscopic examination showed a marked condition of chronic passive congestion.

Stomach much distended, but the mucous membrane was normal.

Spleen was practically normal. Either the accumulation from above had pushed it down and made it more readily palpable than normal or else it had undergone a change from a much enlarged to a slightly enlarged organ.

Pancreas was somewhat enlarged. Its consistence was decidedly increased and its tail was bound to the spleen for such a considerable area and by such dense adhesions that it could not be torn away without mutilation. Sections were stained with Mallory's connective tissue stain and I made the following observations:

(1) Marked accentuation of the interlobular connective tissue outline which normally is unrecognizable.

(2) Marked proliferation of connective tissue around blood vessels and ducts.

(3) Increase in the number of the islands of Langerhans. While there was newformed connective tissue between the cells of the islands still the degenerative changes were by no means marked, there being an absence of the deeply staining property of the nuclei of the cells, which condition is so frequently observed in degenerative changes. There was a distinct connective tissue outline of the islands, but it was not so marked as in some forms of chronic pancreatitis. Immediately outside the islands the condition of the cells was good, but this normal state soon faded into an advanced degenerative one. The plasma cells of Unna were abundant in places. Throughout the glandular tissue fine fibrils of connective tissue were plainly seen but not in such amounts nor in such large bundles as to crush out the cells. However, in places the connective tissue did occur in coarse dense bands, and the life of the cells between seemed to be crushed out. In places there was a considerable amount of free blood and also the blood vessels were well filled.

In most respects the microscopic findings were nearer in accord with Opie's description of chronic interstitial pancreatitis. There was not, however, the abundant proliferation of connective tissue that should be expected. In so far as the distribution of new formed connective tissue goes it comes nearer to conforming with his description of the interacinar type which is much less frequent, having occurred only nine times in his thirty cases. Favoring the interstitial type was the fact that the degeneraiive process was plainly from the periphery to the centre; the unaltered condition of the islands of Langerhans, save a slight increase in connective tissue; the presence of plasma cells of Unna; the increased number of islands, and the exaggerated lobulation.

Several interesting features are presented in this case. Probably the most interesting is the age of the patient. In a series of thirty cases Opie found twenty between the ages of forty and sixty and only five below the fortieth year. In Nothnagel's Enclocopedia there is a case of Rosenthal's recorded in a girl sixteen years old. While he could get no history of syphilis or tuberculosis he comes to the conclusion that it was a case of latent congenital syphilis.

Opie found that pancreatic and billiary calculi were frequent etiological factors in chronic pancreatitis. There was in this case nothing indicating calculi, either during life or at autopsy.

Likewise malignant disease was a cause in five of Opie's series. All signs of malignancy were lacking in this case save the thickened peritoneum.

I had also to consider that class of cases

which Opie mentions as ascending infection from the duodenum. In this connection he speaks of the frequency of chronic interlobular pancreatitis and persistent vomiting. An experiment by Carnot is cited where suppurative inflammation was caused by the injection of colon bacilli into the pancreatic duct. While this patient suffered considerably from gastric distress and vomiting, it was only after the disease had made considerable progress.

Unless we are willing to ascribe the etiological factor to syphilis, in the face of a peculiarly clear and reliable history to the contrary, there is no similarity between it and the etiological factor in any of Opie's series.

Gibbon has reported a case in his service at the Pennsylvania Hospital where a cyst of the pancreas was caused by the kick of a horse, but it was an acute process and was relieved by operation. The question as to whether the pancreatitis was due to the trauma referred to, or a sequela of an acute infectious disease as influenza, or was a part of a general condition in which the heart shared, is a question.

It is probably in the light of the history that the primary condition was pancreatic and that the heart was either coincidentally affected or else shared in a general condition.

It is a striking fact that cardiac affections have been found in a large percentage of the cases of pancreatic trouble reported. Can it be that the relation of the heart to the pancreas is somewhat similar to the relation of the heart to the kidney?

I find no records of ascites restricted to the lesser peritoneal cavity. If there had been a pancreatic cyst the conformation of the abdomen could easily have been accounted for, but there was no cyst- If this were a constant condition it might be a valuable sign in pancreatic disease.

Lachrymal Stenosis in Infants and Its Treatment.

By Dunbar Roy, M. D., Atlanta, Ga , Clinical Professor of Eye. Ear, Nose and Throat Diseases, College of Phys, and Surg.

If one will examine the various text-books on ophthalmology, he will be unable to find any reference to the subject of the treatment of lachrymal stenosis in infants. The conclusion therefore derived is, that such a condition in infants is treated in the same manner as in adults. This I consider erroneous teaching. Very grave injury would frequently be done to the lachrymal passages of these tender little individuals if the same ruthless probing and cutting were done as is frequently the case among adults. During the last four years of my practice I have had eight cases of lachrymal stenosis in infants, all of which recovered perfectly without instrumental interference, and one case presented some such striking features, whether as a coincident or as a causal relationship I do not know, that I shall take the liberty of referring to it more in detail. In speaking of lachrymal stenosis in infants we must naturally do so in a very indefinite manner, not knowing whether the stenosis is in the puncta lachrymalia, the canaliculi, lachrymal sac or in the duct proper. This could only be determined by delicate probing or post-mortem demonstrations, both of which methods being often impracticable. When we speak of lachrymal stenosis in infants we naturally mean such cases as present the usual accompanying symptoms of excess of tears in the conjunctival sac or even flowing out upon the cheek, some excoriations of the lower lid, and some slight catarrhal condition of the palpebral conjunctiva. There need not have been previously a dacryocystitis, either acute or chronic.

The well-known fact that the mucous membrane in infants is so susceptible to swellings and edematous conditions, will in a great measure account for the stenosis occurring in individuals of this age. Yet such pathologic conditions do not constitute the whole etiologic factor in these cases.

For convenience I have made the following groupings of lachrymal stenosis occurring in infants :

1. Stenosis due to Congenital Malformations and Non-development in some Portions of the Lachrymal Passages.—Cases of congenital malformation in some portion of the lachrymal passages have been reported by several observers, and the presence of such must not be ignored, when cases of epiphora in insants are brought to us for treatment. Congenital absence of one or both puncta lachrymalia have been noted by various writers.

Benjamin Travers, as early as 1824, says in his book on "Diseases of the Eye," that he had seen a congenital deficiency of the puncta, but the case was very rare, obliteration being much less so. Schon, in 1828, noted the fact that the puncta had been observed closed entirely in new-born infants, and cites two or three authors who mention the condition or had seen cases. V. Walther states that congenital atresia of the puncta does not occur except in connection with monopsia or micropsia ; and Desmarres states that Seiler, Schoen Carron and others have noted congenital, atresia of the puncta mostly in connection with concomitant absence of the eye. The congenital absence, however, of these puncta have been observed by others, who make no mention

of any other congenital defect. Mooren, in a statistics of 108,416 patients, gives only one instance of "defectus punctorum lachrymalium."

In our own country, a case has been reported by Burnett where there was congenital absence of both puncta lachrymalia of the left eye and of the lower punctum of the right eye. The case terminated successfully under operation. Theobald has also reported a case of congenital atresia of one lower punctum. Besides these, cases of congenital atresia, absence of puncta have also been reported by Zehender, Vossius, Fieuzal, Emmert and Blanchet.

Cases have been reported where the puncta were not absent, but only closed by a membrane. Le Henoff calls attention to this condition, claiming that it is not rare in infants to find a small pellicle covering the opening of the puncta.

A. Rochon-Duvignaud, in a very exhaustive article, gives the results of his researches on the anatomy and pathology of the lachrymal passages in the adult and the newborn. According to this observer, in the fetus the nasal duct, up to a certain period, is separated from the nasal fossa by a membrane. The duct also exhibits annular diaphragms or valves at various points along its course; these diaphragms were found by the author in the new-born in more than half the cases. Persistence of a nearly imperforate membrane closing the lower end of the nasal duct, or the presence of diaphragms with only a minute passage through them, is a cause of stenosis in infants, especially when, from the stagnation and accumulation of the secretions, infection, inflammation and swelling of the mucosa result. Bochdalek, as early as 1866, in a contribution to the anatomy of the lachrymal organs calls attention to the fact that in extremely rare cases the inferior valvule of the lachrymal sac develops so as to form a nearly imperforate thin membrane closing the canal. He mentions two cases where this condition existed.

The presence of these valves, especially at the junction of the sac with the lachrymal canal, and the junction of this latter with the nasal fossæ, are considered by many to play the most important role in the stenosis found in infants. For instance, Beraud in his researches states that a valve at the junction of the nasal duct and nasal fossa is missing in only three or four per cent. of cases, and he found complete obliteration of this orifice in fifteen per cent. of the cases of lachrymal stenosis. He also states that the so called valvule of Taillefer, situated about the middle of the nasal canal, is present in about six per cent. of the cases and may be so developed as to close the canal.

2. Lachrymal stenosis occurring as the result of spasmodic contraction in some portion of the passages. Allow me briefly to relate a case which occurred in my practice more than a year ago: Master B., aged two months, was brought to my office for consultation on account of an epiphora of both eyes. On examination I found a slight catarrhal conjunctivitis, while the puncta were freely open. The condition had been noticeable for three weeks past. No discharge could be pressed from the lachrymal sac. A wash was given for the eye, consisting of sulphate of zinc, boric acid and water, to be used three times daily and to be accompanied with pressure over the lachrymal sac. This was continued for three weeks, with no decided improvement in the condition. About this time the father noticed that the infant seemed very fretful, and on consulting his family physician it was decided to have the infant circumcised. This was accordingly done and an immediate cessation of the epiphora was noticed, which has continued ever since. I then began to look up the literature to see if I could find a similar case. This I have been unable to do. The relationship between the circumcision and the cessation of the lachrymal symptoms was so close that I can not but consider it in the light of cause and effect.

In looking up the literature of the subject, I find that there is some reference to spasmodic constriction of the lachrymal passages as a cause of stenosis. In the transactions of the French Ophthalmological Society for 1891, Galezowski states that epiphora often occurs from spasmodic or irritative muscular contraction of the lachrymal passages without any organic changes being prrsent. Wicherkiewiz, at the same meeting, corroborated Galezowski's obsertion as to the occurrence of spasmodic strictures. Seggel, in quite an elaborate article, calls attention to the presence of muscular tissue around the canaliculi and puncta, and reports a case of stenosis, which he said was due to contraction of the sphincter, which in my judgment, is the frequent cause of "watery eyes" in the very aged.

R. Schirmer, in Saemisch. Handbuch, says that spastic constrictions of the canaliculi may occur (as shown by McNamara and Galezowski) in nervous and anemic persons and in this way produce the same disturbances as other obstructions. McNamara, in his work upon the eye, mentions briefly spasmodic stricture of the canaliculus, which occurs either at the inner or outer opening of the canal. The accom-

panying watery eye, if long continued, will be of intermittent character.

Fano calls attention to the existence of spasmodic epiphora due to spasmodic constriction of the lachrymal puncta and canaliculi by spasms of the muscles of Horner. The condition occurs only in women of nervous temperament, often in association with neuralgias. In this manner occurs the explanation for the watery eyes sometimes found among patients suffering from some error of refraction. No doubt but that some of you have seen such symptoms disappear after the proper glasses have been adjusted to the eyes. Since the occurrence of this case in my own practice, I am firmly convinced that we should look more carefully into conditions which might act as a reflex cause in producing this spasmodic constriction in the lachrymal passages. Observation teaches us that epiphora in infants sometimes disappears in a night, and in such cases may we not attribute this result to a relaxation of a spasmodic constriction?

At this point allow me briefly to call attention to a recent article by Schirmer in the Zeitschrift fur Augenheilkunde, which to my mind has a very important bearing in the treatment of watery eyes in elderly persons and in those afflicted with weak physical constitutions. In this article Schirmer recites three cases in proof of his theory that the outflow of tears from the conjunctival sac into the nose is caused solely by the contraction of the lachrymal part of the orbicularis palpebrarum muscle (Horner's muscle), which takes place in the blinking movements which we are constantly carrying out. He holds that neither gravity, nor capillary attraction, nor aspiration through the nose has anything to do with it, but that Horner's muscle by its contraction causes a dilatation of the lachrymeal sac which thus aspirates the fluid into itself.

My own observation agrees almost entirely with these views, and for this reason I have long held it to be meddlesome surgery to slit up the canaliculi and probe the lachrymal duct in every case of watery eyes.

Unless there are decided symptoms of catarrh of the sac and lachrymal duct, the punctum should not be cut, but measures of a milder nature should be used for an indefinite time in the hopes of hereby bringing relief. When the punctum is cut you destroy the function of the sphincter muscle around the opening, and this of itself will make still worse the condition you are trying to remedy. Many elderly people have watery eyes, not because of a lachrymal stenosis, but because this muscle has become weak and flabby and no longer carries on its intended function. How unscientific, then, to slit such a punctum with the idea of giving relief.

3. Stenosis, the result of a catarrhal thickening of the mucous membrane at some point in the lachrymal passage. This third and last consideration of stenosis I would place as the most frequent cause of epiphora in infants. In the cases which I have seen there was a slight catarrhal conjunctivitis which was either primary or secondary to a similar condition in the lachrymal passages. In only one instance could secretion be expressed from the lachrymal sac. In two instances there was a marked catarrhal condition of the nasal cavities. This latter organ should always be closely examined in such cases.

A. Peters, of Bonn, has reported seven cases of lachrymal stenosis in infants due to a catarrhal condition of the mucosa of the lachrymal sac. He believes that blennorrhea of the lachrymal sac in new-born infants is caused by the persistence of the fetal membrane closing the lower end of the nasal duct. Fluid accumulates in the sac, the product of cellular disintegration and secretion from the mucosa of the sac, rather than derived as an inflammatory exudate from catarrh of the mucous membrane. The condition is one of atresia and retention and not catarrhal inflammation.

He recommends simple treatment, expression of the contents of the sac by digital pressure and repeated irrigation of the eye without the use of the knife or probe. He quotes Vossius and certain French authorities in favor of gentle treatment. He strongly urges this palliative treatment in preference to any instrumental application.

In support of Peter's theory, Lange reports a case of blennorrhea of the lachrymal sac in a child five days old. Pressure upon the sac was followed by a discharge of laudable pus from the nasal cavity of the same side, but none came from the lachrymal canals. All symptoms of lachrymal obstruction disappeared in a few days. Heddæus confirms the observations of Peters, but differs from him in thinking that the mechanical expression of the contents of the sac is unnecessary. Konigshofer, in discussing the epiphora in children, says that dacryocystitis or dacryostasis neonatorum, according to his observation, is mostly a temporary blocking of the passages by mucus or a persistence of a thin epithelial closure of the nasal end of the duct. All cases observed by him were cured by industrious expression of the lachrymal sac, a passage of the sound being necessary in only one case. Landolt, in treating of obstructions in the lachrymal passages of the new-born, has this to say in regard to the

treatment: according to his observations it is never necessary to split the puncta. He dilates the punctum with a conical sound and injects either a bichlorid solution 1 to 5,000, or 10 per cent. solution of boric acid into the sac with an Anel's syringe.

An important cause of a catarrhal condition in the lachrymal duct, and more especially in the nasal cavities, is the presence of adenoids in the nasopharynx of these little patients. Three cases have come under my observation during the last two years, where a condition of watery eyes was associated with the presence of adenoids and where the removal of the latter caused an entire disappearance of the eye symptoms. I make it a practice to examine the nasopharynx of every infant brought to me with a catarrhal and watery condition about the eyes, and if adenoids are discovered they are removed immediately, no matter how young the patients.

Before writing this article, and after consulting the various works on ophthalmology to see what the authors had to say in regard to epiphora in infants, I addressed letters to twelve ophthalmologists and asked them to answer the following questions:

1. Have you ever seen any case of stenosis of the lachrymal passages in infants which you thought was due to spasmodic contraction, the result of a reflex irritation?

2. What treatment do you use for lachrymal stenosis in infants?

To these letters I received seven replies, as follows:

Dr. H. Knapp: "1. No. 2. I leave the lachrymal trouble alone, as it commonly rectifies itself by the development of the nose."

Dr. E. Gruenig: "1. I can not recall a case of lachrymal stenosis, either in infants or adults, due to fpasmodic contraction. 2. In cases of lachrymal stenosis in children I probe under ether, using Theobald's probes."

Dr. William Cheatham: "1. No. 2. I have seen, I think, as many as five cases of stenosis lachrymal duct in infants, all relieved by one to three probings with Bowman's No. 1, without incision of the punctum."

Dr. Swan Burnett: "1. I have never seen a case of stenosis of the lachrymal passages in an infant which I thought was due to spasmodic contraction. 2. The few cases of dacryocystitis in infants that I have seen I have treated in the usual way by opening the canals and treating the sac. I don't remember that I ever saw a case of stenosis not due to inflammation."

Dr. Adolph Alt: "1. I do not remember having ever seen a stenosis of the lachrymal passages in infants which I thought was due to reflex contraction. 2. The cases of stoppage in infants, if not due to the infectiod of the mucous membrane of the drainage apparatus, I have always referred to an epithelial adhesion, and this usually gave way to one or two probings."

Dr. George de Schweinitz: "1. I have never seen a case of stenosis of the lachrymal passages in an infant which I thought was due to a spasmodic contraction, the result of reflex irritation. 2. The treatment I use for lachrymal stenosis in infants depends entirely upon the etiology. Many of the cases get well without any treatment except some irrigation of the conjunctival sac and nares; they get well simply because in the development of the nose a preexisting contraction of the passage disappears. Others, evidently dependent upon a nasal catarrh in the broadest acceptation of the term, get well by nasal treatment. A few with a good deal of purulent secretion are associated with stricture and seem to me to demand the same treatment that a similar condition in adults requires. I very rarely, however, and I have seen a good many cases, have found it necessary to divide the canaliculus and pass probes."

Dr. Samuel Theobald: "1. No. 2. I have met with a good many cases of blennorrhea of the lachrymal sac in infants, accompanied with epiphora. In most of these cases there was not an actual stricture of the duct (such as we meet with usually in adults), and they have gotten well without operative interference. My favorite remedy is a collyrium of hydrarg. bichlorid 1-24 grain, sodium chlorid 3 grains to ounce of water. This to be dropped into the inner corner of the eye three times daily, each application to be preceded by an attempt to empty the lachrymal sac by pressure with the fingertip. Occasionally it happens that no benefit results from this treatment. Then, after it has been thoroughly tested for some weeks, I resort to operation, slitting the canaliculus and probing the duct."

In all my cases a cure was established by the use of an astringent wash to the conjunctiva in connection with massage over the lachrymal sac. In no instance was a probe used. I can imagine some cases where it is necessary to slit the canaliculi and pass probes into the nasal duct. Palliative measures, such as the use of astringent washes, accompanied by massage over the lachrymal sac, will ac complish the necessary result in all but exceptional cases, even if the treatment has to be continued for several weeks. I believe that the canaliculus should never be slit, thus destroying forever the contractile effect of the sphincter around the puncta. At the same time it is necessary to see that there is no blocking of the nasal passages which should be as rou-

tine as the cleansing of the eye. I am firmly convinced that many cases of epiphora in infants will be relieved if more judicious attention is given to the nasal cavities.

The Diagnosis and Treatment of Tuberculosis of the Kidney.*

By Randolph Winslow, A. M., M. D., Professor of Surgery, University of Maryland, Baltimore, Md.

The very courteous invitation to read a paper before this distinguished body reached me at a time when I was much occupied with my professiorial duties, and consequently unable to devote that thought and care to the preparation of a paper, which the occasion demands.

In considering, however, how I might occupy the time at my disposal in a profitable manner, the subject of tuberculosis of the kidney presented itself, and comes with an especial fitness at this time, since a case recently in my care was a native of this state.

I will make this case the subject of my remarks to-day.

J. H. White, aged 23 years, laborer, was admitted to University Hospital, Baltimore, on February 16th, 1905, and was discharged improved March 23rd. There is nothing of especial interest in his family or previous personal history. His health was good until the present ailment began. He denies having had venereal infection of any kind. Almost one year ago he experienced an increased frequency in micturition, with pain, and subsequently passed bloody urine. These conditions gradually abated, but about Christmas they re appeared with increased severity, and have continued to the present time. The patient is somewhat emaciated and is cadaverous in appearance. He does not complain of any marked pain or discomfort in the region of either kidney, nor can the kidneys be palpated. He has not had symptoms of renal colic, and his distress is referred to the bladder. On examining the bladder with the sound, some pain was felt by the patient, but no stone or other pathological condition was detected. On admission his hemoglobin was 70% red blood cells 4,000,000 and leucocytes 12,400 to the cubic mm. The examination of the urine showed spgr. 1018, color light, reaction acid, a distinct ring of albumen, no sugar, and an abundance of pus. His temperature was rather irregular and ranged from normal to 101 F. and the pulse rate from 80-100. The urine was also examined for tubercle bacilli with negative result. The heart and lungs appeared to be normal, nor was there any evidence of disease of the testicles, epididymes or other external genitalia, whilst the prostate may have been somewhat enlarged.

A cystocopic examination was made by Dr. Page Edmunds and revealed an almost normal bladder, with some inflammation and ulceration about the left ureteral orifice. A catheter could only be introduced a short distance into the left ureter, when it met with an obstruction. The right ureter was not catheterized. The diagnosis of tubercular ureteritis and nephritis was made. Lumbar nephrectomy was performed in the usual manner. The kidney was separated from its connections with some difficulty and brought out of the wound. It was enlarged, mottled and lobulated, resembling a fœtal kidney. The ureter was dilated and much thickened, and was divided quite low down. When the kidney was incised a number of caseous foci containing pus were found, and miliary tubercles were also present. The pus cavities corresponded to the calyces of the organ. The patient did reasonably well, passed urine in sufficient quantities, had but little elevation of temperature, and was able to sit up in ten days. He gained flesh and appetite and left for home in a much improved condition, but still sufferiug from painful micturition.

Tuberculosis of the kidney occurs both as a primary and secondary process. It is said that 15% of cases of renal tuberculosis are primary, while 25% of tuberculous patients have some secondary infection of the kidney. This infection is usually conveyed by the blood current, less frequently by an extension of the disease from some contiguous structure, while in rare cases there may be an extension from the bladder upwards along the ureter. This disease may occur at any age from infancy to senility, but it is most frequent from 20 to 40 years of age, and is found more frequently in females than is males. Both organs are involved in a considerable proportion of cases. The object of this paper, especially, is to call attention to the fact that in some cases, I might say in most cases of renal tuberculosis, the symptoms are referable to the bladder, rather than the kidney, and these patients, as the one whose protocol I have read, have their bladders washed out for a long period, without any corresponding benefit. It is therefore important that the practitioners of medicine should be on the alert to recognize the true condition as early as possible, in order that effective surgical treatment may be applied. The symptoms of this affection are by no means uniform. In some cases there may be no symptoms at all, until a very late period; in all cases some time must elapse before distinctive

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symptoms occur. The family history in some cases will show a decided tuberculous predisposition, as in a case operated on by me where the paternal grandfather and grandmother, father and mother, and three brothers died of tuberculosis, thus showing an heredity tendency to some manifestation of this disease, and gave the clue to a correct diagnosis. Sometimes the first symptom will be pain in the renal region, acute and lancinating, radiating down the ureter, or reflected to the shoulder, or other parts, or dull and aching, and more or less stationary. A tumor mass more or less resembling the kidney may be the first sign noticed or there may be no palpable lump in the loins. As has already been stated, the first and sometimes only symptoms will be referred to the bladder. Dr. George Walker, from whose elaborate article vol. xii Johns Hopkins Hospital Reports, I have obtained the statistical information herein detailed, says: "So much am I impressed with the great frequency of this symptom, that I hesitate to make a diagnosis of renal tuberculosis where it is absent." Frequent and painful micturition is then a prominent symptom in almost all cases of tuberculosis of the kidney. In some patients the discomfort is of a burning character, rather than painful, as was the case with a young colored woman upon whom I operated. The urine may be increased in quantity as well as in frequency and will soon show pathological changes. It becomes cloudy or discolored from the admixture of blood, pus, epithelium and caseous material. The occurrence of pus in an acid urine is strongly suggestive of trouble of the upper urinary passages, and not the bladder. The pus may be small in amount or may form a large part of the excretion.

Blood in varying quantities is found at times in almost every case, and should be carefully sought for. Albumen is usually present, dependent upon the amount of pus in the urine, tube casts may or may not be found. Tubercle bacilli can usually be found in the sedimented urine, but are sometimes overlooked. Other organisms are also generally present. When possible there should always be a cystoscopic examination of the bladder, and sometimes the ureters may be bougied, but there is always danger that the healthy ureter may be infected in this manner, hence it is best not to catheterize the healthy ureter in most cases.

Constitutional symptoms are generally absent or not marked at first, but usually occur before long. These are especially, more or less, elevation of temperature, with remissions and sweats as in other tuberculous conditions, progressive and often rapid loss of flesh, sometimes vomiting, and when both kidneys are diseased, diminished excretion of urine, and eventually uremia. As the infection is frequently a mixed one, a blood count will often show a marked leucocytosis, and is a valuable adjuvant in making a diagnosis.

This paper deals especially with the discrimination of renal tuberculosis from cystitis, or other disease of the bladder, but there are other pathological conditions of the kidney that more or less simulate tuberculosis. Renal calculus presents many of the same symptoms, but there is an absence of as marked constitutional phenomena. The vesical irritation is not so pronouneed, the urine does not contain tubercle bacilli, unless there is an association of tuberculosis with lithiasis, and a skiagraph will generally show a stone.

Neoplasms do not cause the pronounced symptoms of tuberculosis, there is no pus in the urine, bladder symptoms are not present, and the tumor mass is larger, and grows more rapidly.

Pyonephrosis from infection with pyogenic organisms is a more acute process, as a rule, is often due to extension from below and presents a larger and more painful tumor, with rigidity of the overlying muscles and greater tenderness on pressure.

Hydronephrosis is not likely to be mistaken for tuberculosis.

Having determined the nature of the affection, and the side diseased, it is important to ascertain the presence and functional competence of the opposite organ. This is best done by a cystoscopic examination, by means of which the urine may be seen to escape from the orifice of the uterer and in appropriate cases the ureters may be catheterized and the urine from both ureters collected and examined. The injection of 1cc. of a 20% aqueous solution of methyleneblue into the subcutaneous tissues is also a valuable test, as this is promptly eliminated by the normal kidneys, but slowly by diseased organs.

Tuberculosis of the kidney is a fatal affection, and no case is known where the patient has recovered from the disease, though in some cases the fatal result is long delayed. Dietetic, climatic, and medicinal treatment, has no special power to arrest or cure the malady, and surgery alone offers some hope of restoration to health and usefulness.

From the foregoing remarks it will be seen that the treatment of renal tuberculosis is surgical, and when the patient's condition is sufficiently good to withstand a serious operation, and the opposite kidney is healthy, nephrectomy ought to be performed. Even if the opposite kidney shows evidence of disease, nephrectomy may be permissible if the kidney is disorganized,

and is a focus from which tubercle bacilli are being discharged. The presence of tuberculous disease of the ureter and bladder does not contraindicate a nephrectomy, as it is a matter of observation that the disease of these parts may remain stationary or progress but slowly, when the affected kidney has been removed. As in malignant diseases in general, early operation is indicated. As soon as unilateral tuberculosis of the kidney can be determined, the time for removal of the organ has arrived. In some cases, where the condition of the patient is not favorable, or where there is extensive suppuration, it may be proper to do nephrotomy and perhaps subsequently remove the kidney. Two methods may be employed to reach the kidney, the lumbar or the abdominal. It is always preferable to use the former, when the tumor is not too large, as it is retroperitoneal, gives better drainage and has a lower mortality.

The following cases of undoubted tuberculosis of the kidney have also been under my care rather recently.

Case 2.—Mrs. Z., white, 40 years of age, native of Maryland, was admitted on Oct. 30th, 1903, and discharged December 10th, improved. Her family history has already been mentioned, as showing a marked tuberculous tendency. She has had measles, scarlet fever, pneumonia and typhoid fever, without sequelæ. More recently has suffered with quinzy and muscular rheumatism. She is married and has eight living children and two who are dead. The first thing she can remember in regard to the present ailment, is that her urine became dark and offensive, sometime subsequent to this, she felt something slip in her right side, followed by much pain, which has continued more or less since. She has lost weight and strength. Present condition: There is a large mass on the right side extending from the ribs to the pelvis, hard, irregular, tender on pressure, but not very painful. Heart and lungs appear healthy. Does not complain especially of her bladder. Hemoglobin 70%, white cells 6,000 to cmm. Urine cloudy, thick sediment, albumen present, no sugar, slightly alkaline, and a large quantity of pus, crystals of triple phosphate, mucus and epithelium.

No cystoscopic examination was made. In view of her history, the presence of a tumor mass in the right flank, and the presence of pus in the urine, it was thought that a condition of renal tuberculosis was present, and an operation was decided on. In view of the large mass, an anterior incision through the right semilunar line, was made into the peritoneal cavity. The cæcum and ascending colon were firmly adherent to the mass in the side, and there were many enlarged glands in the mesocolon which were adherent to each other. The colon was separated with difficulty, during which enucleation the mesentery was extensively detached from the bowel. The mass in the side consisted of inflamed tissue forming, a capsule for the tuberculous kidney. This capsule was an inch thick. The kidney and capsule were removed and a tuberculous lesion of the kidney was found at the lower pole, which had penetrated the kidney and caused the extensive infiltration of the surrounding tissues. It was not possible to remove all the glandular masses under the colon, without unduly prolonging the operation, and increasing the gravity of the situation. Some pus, was also found under the colon. The wound was drained, and no untoward complication occurred. I feared greatly gangrene of the colon, from the extensive injury to the mesocolon. She went home on December 10th, and I am informed by her physician, that her health has been restored, and that no tumor masses can be left in her abdomen. She weighs 175 lbs. and has given birth to a 10 lb. baby since she returned home.

Case 3.—P. F., colored female, aged 23 years, admitted to the University Hospital on December 14th, 1903, and discharged improved on January 15th, 1904. Married, has had two children, who died at an early period, cause of death unknown. Mother died at the age of 41 years of phthisis. The patient says: "I suffer with my bladder and pain in stomach." Three years ago she began to complain of frequent micturition, with discomfort, referred to the neck of the bladder, which was of a burning character, more than pain. Bloody urine was passed for several months, but subsequently ceased and the urine is now generally cloudy in appearance. At first there was no pain in the loins but now at times pain is experienced in the kidney region. She has lost weight from 140 to 110 pounds. On admission the temperature was somewhat irregular, varying from normal to 101 F., pulse, 90-120. There was a palpable mass in the right loin. The urine was cloudy, no sugar, pus cells in abundance, a few red cells and no casts. No tubercle bacilli were found in the urine or sputum. Both uterers were catheterized by Prof. Hundley, from the right side, purulent urine was obtained, from the left side, normal secretion. Hemoglobin 36%. Patient's general condition not very good. Lumbar nephrectomy was done, in the usual manner, and the patient made a satisfactory recovery. She continues well and has gained flesh and strength.

Starch Bandages.

By Southgate Leigh, M. D., Norfolk, Va., Surgeon in Charge, Sarah Leigh Hospital, President Association of Surgeons of the Atlantic Coast Line, etc.

The title of my paper seems too simple a one to be presented to this distinguished gathering of surgeons, and I must apologize for not selecting a seemingly more important subject. My excuse is that the starch bandage which has been exceedingly useful to me in my accident surgery, I find is used but little by other surgeons with whom I come in contact. The chief cause of this latter is, I think, the fact that the ordinary starch bandage material is most unsatisfactory, having but little strength and stiffness.

I have the bandages made of the same starched material which is used in lining ladies' hats. It comes in bolts of 25 yards already starched and dry. It is easily torn into strips and these rolled so as to readily absorb water when immersed In wetting them it is best to use hot water, in which the bandage is placed for a few seconds and then squeezed moderately dry in the same manner as the plaster bandage, the soaking and squeezing both being done in such a way as to prevent as far as possible the loss of the starch. The bandage is applied in a manner similar to the application of the plaster bandage, except that no haste is required since it dries but slowly, taking several hours to become thoroughly set and firm.

In my work I rarely use plaster for injuries above the waist, preferring the starch bandage on account of its lightness, elasticity and ease of application and removal. In fractures of the clavicle, for instance, the ordinary muslin bandage is not sufficient, as it so easily becomes displaced. Plaster is so heavy as to make it unbearable. Starch bandages applied over the regular bandages make a light, firm, secure, slightly elastic and much more bearable dressing. It can be easily cut with knife or scissors and readily repaired by applying fresh bandages over the old ones.

In fractures of the forearm it is most useful, being used in conjunction with anterior and posterior splints. It is light, comfortable and secure. As the parts shrink, a strip can readily be cut from the dressing and a fresh bandage applied over the old one bringing it snugly together.

It is useful in all fractures and injuries of the upper extremity requiring an immobile dressing.

As an outside bandage in operations about the head and neck it is useful in keeping the dressings in place and in immobilizing, if desired. The same may be said of operations in any part of the body. In the groin for instance, the dressings are often badly displaced by the patient's drawing up the thigh. The starch bandage, reinforced by a lateral splint will entirely prevent this accident.

In operations for compound fractures even of the lower extremity I much prefer starch to plaster. In those cases I use a heavy soft dressing, covering the whole with veneer splints and a thick layer of starch bandages. I find that it is easier to regulate the pressure of the dressing, than with plaster, and much easier to readjust when necessary.

One of the chief advantages of the starch bandage is that it offers but little resistance to the x-ray, permitting bones and other structures to be examined by the ray from time to time without disturbing the dressings.

I rarely use plaster bandages except for spinal jackets and for simple fractures and dislocations of the lower extremity.

The advantages of the starch bandage are as follows:

1. Easy to make, apply and remove.
2. Lightness.
3. Firmness with elasticity.
4. Penetrable to the x-ray.

If you have not used them try them and you will find that they fill a long felt want.

*Read before the Seaboard Air Line Association of Surgeons, at Old Point Comfort, Va., July, 1905.

Treatment of Dysentery.*

By Wm. Armistead Gills, M. D., Ex-Ambulance Surgeon City of Richmond, Ex-Surgeon 1st Battalion 10th Va. Infantry, Ex-Student Officer Medical School United States Army, Surgeon Battery A, 1st Virginia Artillery, Richmond, Va.

It appears to me that a very unfortunate condition of affairs exist to-day with many of our honored profession, among them being men of renown; the trend of so many to employ the many pharmaceutical products left at our offices, many of them said to be specifics, others with very extraordinary claims and in many cases the prescriber is not cognizant of the first constituent, many of these preparations contain a dozen drugs when one only is indicated and will serve our purpose—in other words dictating what shall be employed in this or that case.

How easy it is to obviate this—simply by paying more attention to our materia medica and therapeutics which abound in ethical preparations adapted to any case with which we have to deal.

I have been impressed with the absurdity of intestinal antisepsis, claimed by many nostrums in such maladies as dysentery—a purely local disease—in my opinion we do not possess any antiseptic which will retain

this property after being subjected to the action of the alkaline and acid fluids and in the event that it did its effectiveness would be almost nil in the presence of myriads of micro-organisus, processes of decomposition (or putrefaction), intestinal debris and undigested food. The organism of shiga conceded to be the cause of acute tropical (bacillary) dysentery and summer diarrhœa of children, I have never seen except in the laboratory. I have recently examined several cases for the entomœba hystolytica with negative results and my conclusions are that the catarrhal and croupous forms of dysentery prevails in this section, due solely to improper dietary and climatic changes.

Indeed we do not need any new ideas in the treatment of the average case of dysentery if the few hints below are observed, namely, 1, dietary; 2, absolute rest in bed; 3, mercury, followed by salines, opium and rectal irrigation of hot boric acid solution (3i–oi). Unless the case be asthenic I believe that mercury should always be employed at the outset, being antiseptic and cleansing. The "salts" promoting copious watery evacuations by abstracting water from the vessels, removing effete material from the canal. It being a local trouble and in my opinion inaccessible to thorough cleansing by the simple use of hydrogogues or purges—in fact I have seen a temporary improvement with mercury followed by opium with a recurrence of symptoms of a most severe type when irrigation was omitted; my experience has been that the most simple as well as the most obstinate case should be irrigated with hot boric acid (3i–oi), I have used sodium chloride, zinc sulphocarbolate, and others, but have had the best results with boric acid.

I use a sterile catheter well lubricated and introduce it as high as it will admit, a fountain syringe with a capacity of 3 quarts and sufficiently high in order that the velocity be increased. I find that by using the catheter that a larger quantity of fluid can be retained, it fills the colon from above downward and is attended with less pain, this not only contracts (heat) the bleeding vessels, relieving hemorrhage, but removes mncous, blood and intestinal debris, as well as obviating the persistent and annoying tenesmus that always saps the strength of your patient. I employ this irrigation twice daily until blood and tenesmus disappear.

I find that the following is exceedingly beneficial, producing its astringent effect as well as nervous sedation. The opium here has a two-fold effect—relieving pain and at the same time diminishing the peristalsis—a condition very conducive to the healing process of this local disease.

℞ Magnes Sulphas, 3i
Tr. opii deodorata,
Acid sulphuric dil. 6o 3ii
Aq. Camphoræ ad. 3iii
Sig. 3ii every three hours.

I have recently seen two cases of dysentery in which the amount of blood passed was alarming and after exhausting every means at my command to arrest it (including ergot), the hot irrigation checked it almost immediately.

I am well aware that this is nothing new—in fact it is old and time honored, I simply mention it for what it is worth and regret to see such a simple, and yet effective measure almost passing into disuse.

The Eternal Gonococcus.*

By Lucien Lofton, A.B., Ph.D., M. D., Emporia-Belfield, Va., Ex-President Seaboard Medical Association Virginia and North Carolina; Secretary Southside Virginia Medical Association; Health Officer and Physician to Greenville County, Va.

The gonococcus of Neisser, like the country editor, is here to stay. He was here before Neisser saw him and even claims priority to distinction before Moses and the bulrush met.

His ancestry lingered around among the boys when caudal appendages compelled us to seek Morpheus in perpendicular fashion and when lacteal fluid was dispensed from the succulent cocoanut a-la-carte.

His heritage, unlike any escutcheon, claims equal favor with the proudest noble and the Plebian Clay. His title to severe recognition has, all along through the misty ages, placed the banner of immorality in the fine balance and conscripted his lusty counterpart from the crown of diamonds to the thatched "lid" of the Hottentot. He has pursued with regular and unstinted ambition his course of evolution unequaled by any Materies Morbi, known to man or science. His wake is strewn with immaculate spots of marble, finely executed granite, malformed ten-penny nails, window-sash exercise, strange and weird gymnastics, and finally broken congealed moisture. Even upon the festive pine tree he has forced his legion of friends to gnaw with repeated and renewed energy, to bark the flimsy coat of its vitals, meaning no desecration to an unhappy soul. The gay and aromatic blossoms of the jungle. the growing and sappy herb at its side have all gone down before the experimental mind of man in hope of succor and relief, while the oily juniper doubly distilled knocked its shell in relief only to be carralled in the decanter and made to pay

* Read before Southside Virginia Medical Association, Franklin, Va., September, 1904.

holy homage to the masterly presence of the incapsulated duffer.

The mind and body of man runneth not to the contrary, in the presence of the husky fighter man, but to the doctor, oh! what a glorious battle of defeat is ofttime waged by the grandstand specialist; the man with the gruesome looking bottles of balsam, nitre-sandal, and other old shoes, besides which the squirt gun lies silent and mute, under a spell of action unexcelled only by its retrospective plunger cauterized with 16 to 1.

The sadness of this makes me long for one grand oasis of sterilized urethral canals, where throat latches are never checked and preputia bow in all humility to an undefiled corona glandis.

But I hasten to call to mind the effervescent compounds which from dire necessity have vied with sorghum mixtures in seeking supremacy over a common foe, but alas and alack, like the midnight marauder whose brush is all bristles and whose fond association with bootjacks, cuspidors and brickbats he returns, like Banguor's ghost, unscathed and unhurt.

The miniature candle with its vitals manipulated by chemic action is thrust with eagerness down the feverish canal only to pacify a morbid mind and check the intensity of an abnormal longing for a catholicon.

"If the first Eve had boon did receive
When only one apple had she
What punishment new shall be found out for you
In tasting you have robbed the whole tree."

So floundering, sputtering, muttering, and drifting the deadly gonoccus with unrelinquished tenacity ebbs and flows with impunity upon the tide of suffering humanity with that ease and certainity characteristic of a fellow on to his job.

The pleasure par excellence experienced by the uninitiated but gilded saphead who says I am longing for a rough house with Neisser's pets, is gilded no longer when once under the lethal dose.

Harems are myths "down the Pike" "along the line" are truly misnomers to this lad of the sticks for no more forever will he in an outburst of enthusiasm born of an unbroken spirit and cherished by the tender memories of an unsoiled "hippin" declare that a man's a man for that.

No, gentle and tender hearer, his martingale is taken off and he is now ready to stand unhitched, for does he not neigh with great lust to have the crupper removed.

To him the soft summer zephyrs are laden with impure odors, the music of the feathered tribe has ceased to offer up its myriads of praise, accompanied by the cadence of the innocent katydid and dry weather drummer.

Mirth has ceased to flow in the bowl of wine; it has paled into insignificance and is now not ruddy. Yea, the adolescent mind is fraught with misery and woe and all trees are gnarled and shadeless. Flowers are without color, grass without chlorophyl and the great dome of heaven is not unlike his miserable spirit, bluer than ever before. The frills of the sexual life well known to all gay Lothario's are studded with globules of superstition and unrest, and unhappy, indeed, is the head that wears the Spanish crown.

Too true, dear hearer, do we doctors submit oftentimes to the ravages of the common enemy and promise with great restriction that we are masters in the art of destroying this merry will-o'-the-wisp, perchance only to have our friends in trouble heap calumny upon us from afar 'neath abated breath and behind classic presidentive teeth. Proud, indeed, will be the doctor who saws some wood and preserves the dust therefrom, for he knows not the time when the winds may rise, scatter his substance and prostrate him bare before his confiding and trusting ward.

Ye generation of gonococcus, wherefore cometh the strength with which thou art imbued?

I go groping in the caverns of the sages only to find you master. From hence I tread the milky way of modern science, and yet you are Charlie on the spot.

The G. U. man is upon the verge of despair and stands gasping at your appalling audacity and advances. There never lived a prouder race or a more wholesome liver.

The fantasie is on; has been on since the cock crew and the magic wand is diligently sought.

Where, oh, where is a Moses?

Retro-Displacements of the Uterus.*

By A. E. Baker, M. D., Charleston, S. C.

This is, with one exception, the commonest disease of women, and constitutes one-fifth of all gynecological cases. For this reason I will treat of the subject in detail:

The local symptoms; the constitutional symptoms; and, finally, the correction or the treatment of this malposition of the uterus. When the displacement occurs suddenly, as from a fall or jump, the patient complains of pains low down in the back, or a bearing down sensation. This discomfort may at times become sharp lancinating pain. When the displacement is of longer standing, the patient complains of pains in the back, and in the neighborhood of the sacrum and the coccyx, often radiating down the legs. The pain is exaggerated by

* Read before the Tri-State Medical Association.

walking or standing, stair climbing, or any laborious occupation.

Constitutional symptoms, viz.: Menorrhagia, leukorrhea, also frequent urination, headaches, etc. The patient sooner or later complains of constipation. This condition is frequently associated with other disturbances of the digestive tract, causing impairment of general nutrition, loss of flesh, and the general appearance of anemia, and more or less marked nervous symptoms, even to the extent of hysteria.

Some of the causes of retroversion: The most common of all is the increased weight of the uterus, and the decreased tonicity or weakening of the ligaments following child-birth. If the woman is allowed too great freedom of movement in bed, if she sits up or stands too soon, if she is allowed to strain too hard in defecation, to lift her baby, or make any physical effort too soon, this increases intra abdominal pressure, which causes the uterus to tilt backward. It should always be remembered that involution of the uterus and its ligaments is not completed for six weeks after child-birth. The patient, and often her physician, are disposed to disregard all precautions at the end of the laying-in period of four weeks. As a matter of fact, backward displacement occurs more often between the fourth and sixth weeks, than during the time the woman of the better class remains in her room. A sudden violent jolt or jar stands next in frequency to child-birth, as a cause of retroversion. Such an accident as a fall down stairs or from a carriage has thrown the uterus backward. Inflammation of the uterine appendages by their increased weight and adhesions form another cause of retroversion. A long continued habit of allowing the bladder to become over-distended is not infrequently another cause. Girls should be cautioned against this habit. Retroversion may be congenital as the result of arrested development. Extensive laceration of cervix or ulceration have a tendency to pull the anterior lip of cervix forward, and this throws the fundus backward.

How to diagnose retroversion.—Only by a bimanual examination. If the abdominal wall is thick, the patient being very fleshy, often it is necessary to chloroform her in order to made an accurate diagnosis. The position and the direction of the cervix are to be noted. In a typical retroversion, the cervix points towards the symphysis, instead of towards the sacrum. Should there be retroflexion, this may not be true, the cervix may be but slightly changed in its position.

Treatment.—The pessaries, when indicated and contra-indicated: In the majority of cases of retro-displacement there is considerable inflammation, which renders any mechanical support intolerable. Adhesions and cicatricial bands may prevent or prohibit replacement, and, therefore, contra-indicates the use of any means designed to hold the organ in place. A tumor or excessive weight of the uterus may carry the fundus backward with a force greater than any pessary can counteract, and, again, the perineum may be lacerated or relaxed to the extent of cousing a pessary, not to be retained in the vagina. From the above, we see that the use of the pessary may be restricted to those cases in which the displaced organs are replacable; in which the pessary is capable of holding them in place; and can be worn without discomfort. Inability to recognize and appreciate the contra-indications, accounts not only for the sailures and disappointments, but also for the many evil results which have followed the indiscriminate attempt to treat all displacements by the pessary or some mechanical support.

Surgical treatment.—Many cases of displacement are so complicated by prolapsed and adherent ovaries; by advanced disease of the ovaries and Fallopian tubes; by tumors and inflammatory exudates; or by peritoneal adhesions, that replacement is impossible. Such cases are only cured by surgical treatment. Many operations have been devised to overcome this diseased condition. I will only mention the more practical ones which are done by our best surgeons:

1st.—Alexander's operation, shortening the round ligaments.

2d.—Abdominal suspension and fixation.

3d.—Vaginal fixation.

4th.—Internal shortening of the round ligaments.

Indications and contra-indications for Alexander's operation.—This operation is indicated only when the displacement is not complicated by a tumor, inflammation of the uterine appendages, adhesions, or other impediments to redlacement. Again, if the uterus is large and heavy, or if the patient is too fleshy, this operation is not indicated. It has been my experience that after the uterus has been displaced for some time, that the ovaries become more or less diseased, either cystic or bound down by adhesions. Hence the necessity of not overlooking the condition of the ovaries in an operation to replace the womb. This explains how often the Alexander operation fails to cure the patient, though the uterus is put and held in beautiful positions, the ovaries still remain in their diseased state. It is the disease ovary far more than the displaced uterus, that undermines so seriously the nervous system and general health of a

woman. As a proof of this assertion, I have several patients whose ovaries have been removed, and the uterus, for want of support given by its appendages, has fallen back into Douglas' cul-de-sac, and there remained, without giving any local or constitutional symptoms. From this experience I am greatly impressed with the importance of knowing the condition of the ovaries when replacing the uterus. From the above we must conclude that the Alexander operation is limited to a very few cases in comparison to the number of retrodisplacements met with.

Intra-abdominal shortening of the round ligaments by abdominal section has exercised the ingenuity of many operators. Wylie folds the ligaments once on themselves and sews the folds together, and fastens them to the anterior wall of the uterus. Mann folds them twice on themselves by means of a special forceps, and sews the three folds together. I wish to call your attention to the union gotten by these methods. It is simply peritoneal union, which will give under any condition of weight or pressure. Experience has convinced me that only muscular union, in this class of work, can be relied upon. I had the oppoatunity of opening the abdomen two years after the Wylie's operation had been performed. I found the round ligaments which has been folded on themselves, the union had given away under the weight of the uterus, and the ligaments looked as if they had never been folded. The uterus, of course, regained its malposition. So Wylie's, Mann's, and Dudley's operotions should be relegated to the past, in that the union they get by folding the ligaments on themselves, is faulty and does not stand because it is peritoneal union and not muscular.

Baldy's operation is a good one. The round ligament is severed near its attachment to the uterus, and the pelvic end is drawn through an opening in the broad ligament, and stitched to the posterior surface of the uterus.

Martin, of Chicago, suspends the uterus by means of a strip of peritoneum taken from the side of the abdomen, and stitched to the fundus of the uterus. I only mention this method to condemn it.

Ventral fixation and suspension.—Lawson Tait first fixed the body of the uterus to the abdominal wall. This method has been developed by later operators. The fixation I do not approve of, because the uterus anatomically is not intended to be held in a fixed position. It is a movable organ, and should be able to adjust itself to suit conditions, viz.: pregnancy, distended bladder, etc.

Recently I had the pleasure of witnessing rn abdominal section on a patient who, three years previous, had a ventral fixation done by one of the ablest gynecologists of the day. Close observation revealed no evidence of the fixation having been done. The uterus had no bands, whatever, to show that it ever had been fixed to the abdominal wall. Many other similar cases have been reported, proving the operation a very faulty one.

As regards ventral suspension, Kelly's peritoneal ligament is very unreliable. If the weight of the uterus draws on the peritoueum to the extent of making a ligament one or two inches long, what prevents this same weight of the uterus continuing to elongate this peritoneal ligament until the uterus is again retro-displaced. The many advocates of this operation, who have reported pregnancy uninterfered with, quite probably met with some of those cases already referred to, in which the uterus becomes detached from the fixed position.

Morrison, of New York: His method is to make a slit in the peritoneum of the broad ligament, drawing the round ligaments out for three or four inches, then suturing the arms of the loop of round ligaments together with chromic cat-gut. This shortens the round ligament, but leaves enough ligament for elastic suspension of the uterus. The round ligament shortened and sutured, is tucked back into the broad ligament slit, from which it was withdrawn. The advantage of this operation is in securing adhesions of muscular tissue instead of peritoneal tissue.

Ferguson's or Tod Gilliam's operation is most unique and scientific. It is the transplanting of the round ligaments into the abdominal wall, and has the following advantages: The uterus is free and movable, there is no interference with pregnancy, menstruation, conception, parturition, and involution. One hundred or more pregnancies have been reported successfully. After labor the uterus remains normal.

Dr. Dougald Bissell, formerly of Charleston, but now in New York, has recently devised the most practical and scientific operation that has been offered to the profession. It is simple and easily done. He cuts a V-shaped plug out of the broad ligament. The base of the V includes the upper border of the broad ligament, including the round ligament, the acute angle of the V extends down into the broad ligament. This V-shaped plug being removed, the raw surfaces composed of muscular tissue are brought together with cat-gut sutures. This union is of muscular tissue, hence will not give way under heavy weight, such as enlarged uterus or in pregnancy.

The Practical Care of Head Injuries.

By Ewing Marshall, M. D., Chairman Medical Staff Home for Friendless Women; Examining Surgeon Travelers Insurance Company; Examining Surgeon Employers Liability Association, Etc.

"Persons, whose lives have been devoted to speculative labors are not aware how great the distance is between a scheme—apparently the best concerted—and its realization." Arrago.

In the last twenty years, I have seen several hundred head injuries and my experience tells me that in no department of surgery is the aphorism more applicable that recovery may occur from apparently hopeless conditions, or that death may follow what seems at the time of injury of little or no importance; therefore, our initial diagnosis and prognosis should be extremely guarded and when called to a person, who has sustained some trauma to the head, direct or indirect, the first consideration should be to as quickly as possible with the least amount of disturbance to the injured individual to place him where careful and continuous observation may be carried out and where surgical interference, if the case demands it, may be promptly applied with the least risk to the patient.

At the earliest possible moment the cause of injury should be learned as explicitly as possible, since the force of the blow and how applied, whether self-applied or by accident, and if by accident, whether it may be charged to an individual or a corporation, all will assist greatly, both in determining the diagnosis and the prognosis of the case.

I believe in the mingling of extreme conservatism with the most heroic measures of thoroughness in head injuries. No severe contusion of the head with the resultant hæmatoma should fail to be carefully investigated and the patient watched and protected certainly for at least twenty-four hours.

At the place of injury a hurried field dressing with little or no interference with the wound should be applied to protect parts from further contamination in transit to the place selected, preferably a hospital, where the injuries are to be thoroughly investigated and attended.

When the patient is at the place where he is to be nursed, the first thing to be done is to cut off the hair and shave the whole head, because tho hair often obscures evidences of serious injuries and is a dangerous mode of contamination to either the traumatic wound or the wound made by the surgeon for investigation. After the patient has had the head shaved and thoroughly cleansed by scrubbing with soap—antiseptics—alcohol, and lastly, thoroughly washed off with plenty of normal saline; then comes the careful examination.

Except where there is only the slightest contusion unless the bone was uncovered by the original trauma it is only the act of prudence to lift the scalp and examine the skull. Of course, then great responsibility rests upon the judgment of the attendants as to what is next to be done.

With no evidence of depression of the bone from the examination of the outer table and with no symptoms pointing to brain injury, even though we have a linear fracture it is my practice not to open the skull, but to bring the scalp together with Z. O. adhesive plaster over a piece of gauze to act as drainage and to await developments. Over this to place protectives, which are not to be disturbed under forty-eight hours, unless symptoms should arise demanding it. Should any symdtoms appear pointing to internal injury, further surgical interference is indicated. Finding either in the first examination or at some subsequent time reasons to uncover the membranes and the brain it should be done thoroughly, as partial relief is worse than no interference.

One of my earliest experiences, over 20 years ago, when assisting another surgeon, gave me the impression just stated. A man fell from a railway trestle to the rocks 25 feet below, striking the left side of his forehead. He never spoke after the accident, until nearly twenty-four hours later, when we removed some spiculæ of bone in a most superficial way. Here only the parts already uncovered were investigated, instead of turning back the scalp some distance from the site of injury. The man apparently made a good recovery, but months afterwards a series of serious symptoms reappearing, a second interference thoroughly performed, discovered another spicula of bone, shaped like and half as long as a horse shoe nail, driven into the brain. Upon the removal of this foreign body, abscesses were set up and the man dragged out a miserable existence with epileptic attacks and more or less paralysis for a year or so longer, until fortunately death closed the scene.

Since then my policy has been either not to interfere at all or do it thoroughly. Where there is evidence of compression or irritation the bone must be removed. The one point that is the key-note of my conservatism is nothing must be done without indication, but with indication the most heroic measures should be carried out. Remembering that on the one side irritation not removed, probably leads to serious results and yet on the other, that you certainly

run the risk of producing irritation by entering the skull.

Raising the scalp, under careful aseptic precautions, is a very insignificant measure and therefore in the majority of cases it should be practiced, as you can do it fairly well under local anaesthesia without the aid of another physician though preferably you should have skilled assistance.

The entering of the skull is a more serious proposition and should be dealt with more cautiously. Unless imperative it should not be done without the presence of one or more associated surgeons and with properly trained assistants.

In discussing the probabilities of an individual case the age of the patient plays a most significant part. A young patient, other things being equal, will recover from what would generally kill a middle aged person and certainly would destroy the aged. I believe the danger of rupture of the brain from contusion progressively increases from birth to old age. I have likened the brain to an elastic bag, very resilient at birth but steadily becoming more and more brittle as do the bones and other organs of the body. Of course, for the same reason, hemorrhage is more apt to occur in the aged. Lastly, the recuperative powers progressively lessen with age.

Where the patient is shocked great care must be used to sustain the body heat and the circulation. Too much stimulants is bad, in fact, if the heart and temperature do not necessitate it none should be used. The reckless way in which whiskey is thrust down the throats of injured people should be constantly cried down by the profession, as it is positively injurious in many cases, and if nothing else predisposes to hysteria. Sedatives have frequently to be used and the bromides are the ones I turn to first.

Diet should be very light and in small quantities certainly for the first twenty-four hours and longer if any pronounced symptoms appear. The bowels should be kept free and the bladder watched. When there is any failure, it should be settled as early as possible as to whether it is due to retention or suppression, and proper treatment should be promptly supplied in either case.

In closing I would like to go on record as opposed to the mallet and chisel in work on the skull, since it has been stated that moderate concussion over the skull may produce brain disarrangement where there has been no previous injury, and granting the possibility of such a thing, it strikes me as cruel to jar in any way the already probably disturbed sensitive organ.

Cholera Infantum—Symptoms and Treatment.

By J. A. Hardin, M. D., Sweetwater, Tenn.

Definition.—A severe form of infantile vomiting and diarrhœa, with symptoms resembling those of true cholera, produced by absorption from the intestinal tract of a special toxin originating in fermenting or decomposing food. Taylor and Wells claim this to be a special toxin due to milk infection, while Holt claims that the disorder is not due to a toxin derived from any particular food. It appears that Dr. Holt is correct, as cholera infantum frequently occurs after children are weaned and have a general diet. It therefore seems that any fermenting or decomposing food producing acute indigestion may cause cholera infantum.

Symptoms.—The definition is so limited as to cover only the typical cases where vomiting and purging both exist, however, in mild cases one or both of these leading symptoms may be lacking, and Dr. Holt mentions cases with stubborn constipation. Nevertheless, in this paper I shall confine myself to the typical cases covered by the definition, and allow the reader to call those milder cases gastritis or enteritis, if he so desires. After a variable but usually a brief period of digestive disturbances the infant begins with persistent vomiting and a severe diarrhoea. At first, the contents of the stomach are ejected, then a bile-stained mucous, still later the ejecta is only a serous fluid. At the beginning of the attack the evacuations of the bowels are faecal, but soon assume the same serous character of the vomited material. At this stage the acid discharges change to alkaline. Little has been found in the fluid by the microscope, only numerous bacteria and epithelial debris. The discharges will wet the cloths almost without a stain, occurring frequently, yet without pain.

The rectal temperature is always elevated, usually 102 deg. F. to 105 deg. F., at the same time the body and limbs feel cold to the touch, and the axillary temperature is often sub-normal.

Thirst is very extreme, the infant in the early hours is very restless, continually fretting and frequently crying, "dink, dink, dink," but water and all kinds of foods either liquid or solid are rejected by the stomach almost immediately after being taken. With such a drain on the fluids of the system the infant rapidly loses weight, the eyes become sunken, the open fontanelles depressed, the features pinched, and the face takes on a peculiar ashy pallor with an anxious, distressed expression. If these symptoms are not soon controlled the

infant goes into a comatose condition, with a fast, weak pulse, and irregular breathing. Instead of the continual fretting, crying, the occasional pitiful hydrencephalous cry, but not calling for anything. If the stupor progresses into coma and collapse, death may occur within twenty-four to forty-eight hours. A very impressive case in my experience, an infant of twenty months began with an attack of cholera infantum the early part of the night, next morning about eight o'clock the parents carried the baby to my office, and as the mother sat down I noticed the gasping breathing, and in less than five minutes the infant expired. I have known a number of other cases attacked suddenly and die within twenty-four hours.

If the Marshall Hall "hydrencephaloid," or spurious hydrencephalous develops, the head will become retracted, pupils dilated and often irregular, breathing irregular and maybe of the Cheyne-Stokes type. There may be muscular twitching and even convulsions. However, the infant will likely last a few days in this condition. In extreme coma, with or without "hydrencephaloid," symptoms the vomiting and purging will subside, the temperature usually falls, in some instances below normal, in other cases the temperature goes very high just before death.

The cessation of the vomiting, with the other symptoms favorable, is the first symptom of improvement, at the same time the diarrhoea will be very much relieved, and faecal matter will begin to show in the movements. However, recovery is slow and relapse is common.

Treatment.—With infants that have been previously healthy and well nourished, the treatment is more satisfactory; on the contrary infants that have been poorly fed, and they are numerous during the fruit and vegetable seasons, treatment is not so satisfactory; therefore, the prognosis is not nearly so good with those fed on artificial foods and those weaned and fed on a liberal diet.

Considering this condition, due to absorption of some toxic element from the alimentary canal, we should direct our effort to eliminate or destroy the poison. As the stomach is usually entirely empty when we reach the patient, we may begin with one-fifth grain doses of calomel and continue every hour until the mercury produces faecal stools, and the vomiting is controlled.

The next means to eliminate or destroy the toxins is to irrigate the colon with a normal saline solution, after a wash of a pint, an ounce or two may be used and retained. A large soft rubber catheter makes a good infant colon tube.

In the restless stage, when the vomiting is giving so much distress, and the thirst is insatiable, a hypodermic of one-hundredth to one-fiftieth grain of morphine and one eight-hundredth to one six-hundredth of atropine, repeated in an hour or two if necessary, gives as much relief as the one-fourth of morphine and one-hundredth atropine to the adult in cholera morbus. The morphine controls the exaggerated peristalsis and thereby aids the stomach and bowels to retain medication.

When the rectal temperature is above 103 deg. F, the warm bath should be used, giving friction to the surface of the body with the hands. Keep up the warm bath ten or fifteen minutes and if the rectal temperature is not reduced sufficiently well, add cold water gradually to the bath until the temperature is down to 100 or 101 deg. F.

For the emaciation due to the drain of fluids from the tissues a hypodermoclysis of the normal saline solution of one-half pint introduced in two places, repeat in six to twelve hours, if indicated, by such symptoms as great thirst, serous discharges, and scanty action of the kidneys.

When brain complications set up, withhold the opiates, and use stimulants—whiskey and strychnine; cold applications such as cold cloths or the ice-cap should be applied to the head.

All food should be withheld until the symptoms are controlled, small quantities of sterile water, two to four teaspoonsful every twenty to thirty minutes if retained, if not, absolute rest, only a small quantity of water with the calomel. If the water is retained the thirst can be still better controlled by increasing the water and the egg albumen sufficient lemon juice to make a pleasant sour. I have known the egg albumen with water and lemon juice taken, enjoyed, and retained, when the infant was vomiting the water. As the infant improves thin gruels made from oat-meal, corn-meal or wheat-flour should be used for a few days, and gradually add milk to the gruel, noticing carefully the cloths to see if the milk is digesting properly. The physician should endeavor to have careful dieting of the infant the remainder of that summer. If a chronic dyspeptic diarrhoea is threatening, as a sequela, the best possible sanitary surroundings should be obtained. The cool, shady country home where the infant may be kept out a great deal of the time offers very much better opportunities for recovery than the hot, dusty town or city home where the infant must of necessity be kept in too closely.

Abscess of the Female Pelvic Organs.

By J. P. Oliver, M. D., Caldwell, Texas.

It has been said, and perhaps correctly, that the study of the female cadava has been the source of more scientific information on the pathology and therapeutics of the female system than any other. While this may be true in the abstract or last analysis of the diseases of the female pelvic cavity, it only reveals secondary pathological changes and not primary. However, there is ample evidence to prove beyond contradiction that the cadava investigations of the female pelvic organs have resulted not only in a better understanding of the causes of these diseases, but a vast improvement in treatment and cure, not to say anything about the relief of suffering women from the pain incidental to child-birth and other causes. The subject under consideration is one of supreme importance to every member of the medical profession, whether a specialist or a general practitioner. Not infrequently women carry pus tubes, suppurating ovary cysts and encapulated sacks of pus, for months and some for years, perhaps, before correct diagnoses have been made. The space between the uterus, bladder and vagina above, and the vagina and uterus beneath, as well as the broad, round and sacro uterine ligaments, is filled with connective or areola tissue which serves physiologically to steady and break the shock, so to speak, which is imparted to the pelvic organs in walking and other common causes. Mr. Duncan, in his work on the diseases of women, says that perimetritis paremetritis is the stock in trade of the gynecologist. These two diseases have been and are still the terror of the puerperal and non-puerperal states. Have caused many women to become steril, many removals of the uterine appendages and untold numbers of cases of social and domestic unhappiness. There are said to be three forms of cellulitis edudative adhessive, phlegmonous and suppurative. The first results in serious effusion; the second in adhesion and displacements of the uterus and its appendages, and the third in suppuration.

The second variety is a hard board-like condition of the roof of the pelvis and surrounding parts is very common, the results of which, ultimately almost disappear by absorption, sometimes are mistaken for small fibroids upon the exterior of the uterus at different points. In the third or suppurative form the tendency of the pus is to burrough and seek an outlet at the most vulnerable point, or that of least resistance. The most usual route being into some of the hollow organs. The bladder, vagina or rectum, vagina first rectum next; or, it may extend upward and seek an outlet at the inguinal canal, especially if complicated with appendicial trouble. Cellulitis usually occurs at either side of the uterus in the connective or areola tissue in the folds of the broad ligaments from ten days to two weeks after parturition. It may occnr much eariier, owing to the septic or aseptic condition of the parts. Usually supervenes upon a local traumatism of some portion of the genital tract or an imperfect removal of the debris of abortion or parturition, and sepsis is admitted through the lymph channels producing perimetritis or paremetritis of the endometrium. The left side is said to be involved more frequently than the right. The entire pelvic areola or connective tissue of the pelvis may become involved. This is not the rule, however, but the exception. Why the left side should be the most vulnerable point of attack we are unable to say, unless it be because there is no valve in the left side at the junction of the spermatic with the left renal vein. This anatomical condition, it is reasonable to conclude, permits or favors blood stasis by gravitation into the radicals or venules of the spermatic vein; or, there may be an easier transmission of microorganisms through the blood and lymgh channels into the endo and paranutrium, and the result being infection by pus-bearing germs. Pelvic abscess is sometimes remote, that is it involves the submucous coat of the peritonium, but maintains its connection with the uterus, pushes it down to the brim of the pelvis, as described in one of the cases reported by Matthew Duncan. The patient being an invalid for seven months. It would seem that any general practitioner or surgeon in the dawn of the twentieth century who would permit his patient to carry a pus sac or a suppurating hematocele for seven months would subject himself to severe criticisms, if not prosecution. Yet, Mr. Duncan's footprints in St. Bartholemews Hospital will be long remembered.

The point most desired in this connection is to impress, if possible, great care in the diagnosis of possible or probable cases of pus formation in the pelvic cavity of the female. Ischio-rectal abscess in the male is frequently found in connection with rectal fistula, either blind or open—this is only referred to incidentally—does not come specially within the scope of this paper. The fluid elements of encysted pus formation of the female pelvic organs is sometimes absorbed, the residue being caseated is not infrequently mistaken for small fibroids, especially if the glandular structure is involved.

Dr. Duncan further states of all the prolific causes of paranutritis of which he has

any knowledge, inflammation of the mucous membrane of the uterus is the most common, and this in both puerperal and non-puerperal state. Why should this be so? Because both are subject to acute and chronic cellulitis. It must be remembered that Drs. Duncan, Hewitt, Thomas, Emmet, Ryford, and many other gynecologists wrote anterior to the micro-organism knowledge of inspection. Hence the discrepancy or apparent discrepancy in the pathological conditions mentioned by these gentlemen and gynecologist of the present day.

Mr. Emmet says very great advances have been made of late years in uterine pathology and therapeutics. I maintain that a close study of the endo and parametrium and the results will keep the profession better informed about pelvic troubles in the female, and more satisfactory results will be obtained from treatment. Inflammation of the endometrium and parametrium is perhaps the most frequent causes of pelvic abscess of the genital tract in the female. These conditions as above stated may follow abortion, especially criminal parturition, hematoceles, ovarian cysts, or traumatism of any portion of the genital tract. Acute cellulitis may or may not be ushered in with a chill. The temperature rises from one to five degrees, pain is often referred to the lower abdomen or to either side. Temperature in the vagina is most generally one degree higher than in the armpit. If the attack be on either side is referred to that side. If general all over the lower abdomen and painful to the touch and usually considerably tympanitic. Many other symptoms are frequently present and the judgment of the attending physician is taxed not infrequently to the utmost degree, because he recognizes the gravity of the case and impending results.

If the patient is seen early and a correct diagnosis made before pus has formed, the bowels should be opened with a saline or mercurial purge; the latter, perhaps, is the best in most cases. Should dirrhoea or pain of persistent character be present, they will demand prompt attention. The uterus should be cleansed of all debris and then irrigated two or three times daily with a warm sterilized solution of either carbolic acid 1 to 3000 or bichloride of mercury 1 to 4000 and an antiseptic pad of absorbent cotton and iodoform gauze applied fresh after each irrigation. After using the germicidal wash warm sterilized water should be used or warm normal salt solution. Each of the antiseptic solutions have their advocates, but I prefer the bichloride. If the case is seen early and irrigation followed as above directed, especially if administered by a trained nurse or the physician himself, oftentimes you will be surprised to see how soon the temperature will begin to decline, especially is this so if strict asepsis is maintained throughout the treatment of the case. If the case terminates in exudation or formation a large majority of the authors to whom I have referred advise the use of an exploratory needle to confirm diagnosis and then insert sharp-pointed scissor beside the needle and discharge the abscess through the vagina, to more radical measures maintain strict asepsis, irrigate the abscess cavity as above directed and the results will usually be satisfactory to all parties. This accords with my experience in a case treated successfully which I shall report below.

Mr. Tait, than whom I know of no better authority on abdominal surgery, reports six cases of suppurating hematoceles, all successfully treated by abdominal section. But he styles it his new plan and says that until recently he has confined his treatment to opening through the vagina or in the neighborhood of Poupart's ligaments. Experience he says has driven him to the conclusion of Dr. Emmet "that I cannot regard the introduction of the trocar into the inflamed pelvic tissues far from danger under all circumstances."

Howard Kelly, a gynecologist, said to be Mr. Tait's equal, if not his superior in abdominal work, "Says the causes of suppurative affections of the pelvic organs in the female are due to any of the pus-producing micro-organisms which usually find entrance through the vagina into the uterus, thence into the pelvis by way of the uterine tubes or by way of the lymphalies into the parametrium. Finally Mr. Kelly advises the vaginal route of discharging the abscess pus to more radical measures. Of 65 cases reported in his work, there were 55 cases of pelvic abscess, 10 of clearly defined pyosalpinx; of the 65 cases opened through the vagina 32 were cured, 2 died, some very much relieved, a small portion no better."

Hence, preponderating evidence favors the vaginal route of discharging the pus from a pelvic abscess in the female from whatever cause to more radical measures. Much easier performed. Not so grave to the patient and I believe gives better results. Some cases whose environments are different demand more radical measures. The case submitted below was so much emaciated. am sure abdominal section would have resulted in the fatality of my patient who now enjoys fairly good health. July 27, was called to see Mrs. G., colored, about 45 years of age, married; mother of four children; 8 years since the birth of the last. The trouble which I was called was malarial fever and irrigular menstrual flow which according to her statement had ex-

isted for some time. There was no history of any specific disease or constitutional vice; digital examination revealed a patulous os with some erosions. The uterus was curetted and local application of iodine and carbolic made to the endometrium. During the examination a round tumor about the size of a small orange was detected in the region of the left ovary. I told her that might require an operation as there was no fluctuation that could be detected. Hot vaginal carbolized douches was advised daily.

This woman was some days better some worse, fever continuing all the time, ranging from 104 to 99; never perhaps clear of fever for over two months. The flow from the uterus still kept up. Dr. Scott, of Temple, saw this patient with me one time and remarked that it was not only a very peculiar case, but interesting also. Made no suggestions other than what I was doing. On the 28th of August the uterus was curretted again with a dull or blunt currette. On the 4th of September, to my great surprise, my patient aborted a foetus of about two months. The uterus was examined and indicated that it was well cleansed of all secundines, everything with a large clot of blood and the foetus was in the chamber; strict asepsis was observed and for a few days patient seemed to be somewhat relieved. The tumor, however, still remained; September 9th vaginal examination revealed a round hard mass pushing against the posterior and superior vaginal wall seemingly perfectly hard; no fluctuation could be detected. A hypodermic needle was introduced to ascertain, if possible, whether or not the tumor contained pus, which was verified on the withdrawal of the needle. A narrow curved-pointed bistury was introduced at the most dependant point and the pus discharged through the vagina. On the 12th of September Dr. Krueger assisted me and the vaginal opening was dilated with a large uterine dilator and iodoform gauze drainage applied. The next day the gauze was removed and a 3-8 rubber tube substituted which drained the pus cavity well. The abscess cavity was irrigated daily for 8 or 10 days with warm bichloride solution 1 to 4000 followed by warm sterilized water. My patient made an uneventful recovery.

Intestinal Obstructions.

By F. L. Potts, M. D., Spartanburg, S. C.

Mr. President and Gentlemen:

I desire to report a series of six cases of intestinal obstruction, four of which were due to post-operative adhesions; one to a slipping of the bowel through a hole in the omentum, and one to invagination.

Symptoms.—The symptoms of obstruction regardless of the cause are of course practically the same; previous history only aiding in determining the condition present when following abdominal operation six or eight months, or less. There is suddenly developed a severe abdominal pain, early vomiting and absolute constipation are also conspicuous and important symptoms. If the obstruction is high in the small bowel, distressing hiccough may precede vomiting. Except for the possible discharge of the intestinal contents below the seat of obstruction, the constipation is usually complete and obstinate. Accompanying the latter condition there is tympanitis, which is most marked in obstruction of the colon. Intermittent and colicky at first, the pain soon becomes agonizing and constant, vomiting also alternating with painful retching, is more constant and severe after several hours. The material first ejected is gastric and mucus, it then becomes bilious and finally is characteristically stercoracious, due most probably to the putrid decomposition of stagnated contents above obstruction. The constitutional symptoms develop early, are intensely threatening to life and cause rapid and profound depression and collapse. The physical examination will discover a swollen and extremely tender and tympanitic belly.

Diagnosis.—That a correct diagnosis should be made at the earliest possible moment is of the utmost importance, as upon this hinges the immediate active treatment. First of all, ileus must not be confounded with an aggravated tympanitis which often gives rise to symptoms like those of intestinal obstruction. In tympanitis, however, the general pain is not often paroxysmal in character, the pulse is a little effected, the general condition is not that of profound depression and there is an entire absence of the characteristic facial expression of ileus. Finally, persistent efforts to produce evacuation of the bowels are followed by copious movement.

Treatment.—While prophalaxis is the most important point in the treatment so far as ileus following abdominal section is concerned, only the active treatment will be dealt with here. As soon as signs of ileus are noted, the efforts must be directed at once towards securing a free movement of the bowels by brisk purgatives. A large dose of calomel is given by mouth and a high enema of soap and water with a dram of turpentine to a pint are given every two hours. To relieve pain, stupes of turpentine and hot water are applied. If the sign becomes urgent and there is marked increase in pulse rate with paroxysmal pains and

vomiting stercoraceous, the indications are for immediate operation.

Operative Treatment.—Every precaution must be observed to prevent shock. Ether I believe to be the best anaesthetic, as it is stimulating, especially primarily. The patient should be dressed in warm woollen clothing and the room kept very warm; hot water bottles should be constantly applied to patient's body. Noting as accurately as possible the position of the supposed obstruction, an incision of from 2½ inches to 3½ inches long is made, usually down the median line. The intestines are drawn out and laid on or covered in hot gauze and inspected, and under any and all circumstances, it is best to be slow in concluding that the ileus is due to a slight twist in the intestines, especially in post-operative obstruction. In intussusception all adhesions must be handled with the utmost care and precaution, traction always very gently applied. If the point of obstruction is not at once found, a thorough search from below upward must be made which is usually free from difficulty following the collapsed bowel up to the beginning distention and here finding the obstruction.

Case I.—Elizabeth S., age 5 years. Was first seen by myself in consultation on the fourth day of her illness; temperature 100, pulse 110, respiration shallow and hurried, expression anxious, belly very tympanitic and tender, no tuma palpable. Diagnosis of intussusception was made and immediate operation advised. Patient was prepared in the usual manner—chloroform anaesthetic used. Abdomen opened down median line, digital examination, detected tumor involving ileum which was invaginated about 8 inches and readily reduced. Abdomen was closed without drain, patient made perfect recovery, and was discharged on the eighteenth day.

Case II.—J. B., male, age 52; was stricken with a severe attack of colic; two months after appendectomy, the usual remedies were applied but patient was little benefited. Operation was advised and accepted on the fourth day. Usual preparations made, ether given and an incision 3½ inches long made midway between symphysis and umbilicus. After a careful search with the index and middle fingers within abdominal cavity nothing could be detected —intestines were now gently lifted out and carefully examined and a twist about midway of the ileum, so judged to be, was found. The examinatiou was continued and no further trouble could be found. Time on table, 40 minutes. Patient's bowels moved on third day, were obstinate on the 5th day, when a large dose of castor oil was given with most happy results. From now on recovery was uneventful and patient was discharged on the 21st day.

Case III.—Mrs. D. B.; four months after an ovariotomy begun to notice defecation was incomplete and unsatisfactory and gradually grew worse. This condition lasted six weeks when patient was suddenly taken with severe abdominal pains, rapidly becoming tympanitic, and vomiting fecal matter, expression anxious, pulse 120, temperature 96—operation of course immediately advised—incision of about 3 inches in length was made down the median line, when peritoneal cavity was opened, a pint or more of clear straw colored fluid escaped, on the introduction of two fingers, it was at once discovered that the loop of intestine was adherred to the pedicle of ovary, noting change in color to the bowel wall and fearing its extreme friability, part of the stump tissue was left to the bowel. Before leaving the table she had thorough evacuation and gas escaped in volumes. Patient was discharged on the 31st day.

Case IV.—B. W., male, age 31 years; suffered an attack of appendicitis of four weeks duration, developing what was supposed to be a considerable amount of pus; and, in fact, after the 9th day the right iliac fossa was believed to be full of pus. He refused operation and after three more long tedious weeks, he was able to be up and out, but strength and any degree of comfort was very slowly regained, and at no time could patient straighten up, complaining of a pulling sensation in side. This went from bad to worse until twelve weeks after first attack when patient was suddenly taken with severe abdominal pains and vomiting, obstinate constipation, which could not, or was not overcome. Being familiar with the previous history, operation was advised, ether given, and after the usual preparations, an incision of three inches long was made through the rectus muscle. On entering the peritoneal cavity nothing escaped and after a most thorough search a stump of an appendix was found. It has never been my lot before nor since to see so many adhesions to small bowel, and everything to pelvic wall. Incision was closed without drain, recovery was perfect, patient discharged on the 18th day.

Case V.—Mrs. C. N., aged 28; after riding 18 miles patient partook freely of raw tomatoes and hard boiled eggs; in the course of two hours was suddenly seized with severe abdominal pains and vomiting. The contents of the stomach only were ejected, a hypodermic of morphine and atropine was given and repeated in half an hour. Hot applications were applied to the abdomen and more morphine given, five grains of calomel and soda followed in four hours

after with epsom salts and a high enema of warm water and soap suds; a tuma could now be easily palpated in the median line midway between umbilicus and symphysis. Ten hours from onset no bowel movement had been secured and an enema of a salt solution of epsom salts given with no results. Expression was now anxious, pulse rapid and pain considerably relieved. Operation was advised and accordingly done 36 hours after beginning of the attack. The pulse was now 140, and the expression was death-like, still we believed it our duty to give her the hope of a last chance. Ether was given and a median incision was made. On opening the peritoneal cavity a quart or more of black offensive fluid escaped followed by lumps of well-formed fecal matter. On inspection it looked as though everything was gangrenous. A loop of the ascending colon was found slipped through a rent in the omentum, and about 6 inches of gut from this point was gangrenous, and in fact, at one point had slouched through to the lumen. Resection was done, cavity cleansed as well as possible and coffer dam with central rope drainage was introduced; patient was bandaged and removed from table—she came around from anaesthetic and died in 10 hours. The puzzling point in this case to me was such an extensive gangrenous process within 36 hours from onset of attack.

Case VI.—W. B. O., age 21, male; consulted me three months after an operation for appendicitis, complained of a painful swollen scar. On examination it was found to be infected and was later opened in the lower half, liberating a considerable amount of pus, which relieved all symptoms and healed nicely. One month from this time, four months after original operation, patient was taken with severe colic. Usual remedies given with relief and thorough bowel evacuation secured. Six weeks from this attack I was hurriedly called to see him, again on examination, found him suffering from a most acute paroxysmal abdominal pains and severe vomiting. Physical examination revealed a mass just beneath top of incision. A hypodermic of morphine was given followed by complete relief. A large dose of calomel and soda was ordered, to be followed by a dose of castor oil next morning. My second visit found the patient comfortable, but no bowel movement had yet occurred. A dose of salts was now given, with enema four hours later if necessary. Patient's general condition was good, on second day every and all means were made to secure bowel movement but to no avail; condition was so very good it was thought best to wait a few hours longer, in which time hot poultices were used, but no more purgatives given. On the morning of the 4th day patient was anaesthetized with ether and an incision of three inches in length was made down median line. On entering the peritoneal cavity, it was at once discovered that the tumor in the right side was a mass of omental adhesions, a band of which had completely strangulated the ileum, below the strangulation the bowel was perfectly collapsed, and above of course considerably distended. The band and other adhesions were liberated, and the bowel was somewhat strictured at this point, otherwise everything was in normal condition. Incision was closed without drain, recovery was uneventful, and the patient discharged on the 32d day.

Report of Gall-Bladder Surgery, with Especial Reference to Early Diagnosis and Early Operative Interference in Cholecystectomies, with Brief Summary of Twenty-Eight Cases, Including Six Cholecystectomies.*

By Frank Martin, M. D., Baltimore, Md. Clinical Professor of Surgery, University of Maryland.

Since surgery of the biliary tract has become such a prominent field, in which so many advances in recent years have been made, I thought I should be justified in offering a few remarks on the subject, and presenting a few cases of interest that have come under my care recently, as well as bringing up a few questions for discussion as to early operative interference, which seems to be one of the leading questions of the day. Gall-stones are of such frequent occurrence that Dr. Hans Kehr, of Halberstadt, states in his most excellent work on gall-stone disease (and I might say here in passing that I know of no better authority on this subject, as he publishes in this book over 547 gall-stone operations, and since the publication of this book he has added many hundreds more to his list, so that he has done, as he says, no doubt, more laparotomies for gall-stones than any living surgeon), "that almost every tenth adult body exhibits them, and quotes the pointed remarks of a surgeon, 'that every theater, every church and every concert-hall would resound with lamentation if stones occasioned discomfort in all cases;' he says that only about five per cent. of gall-stone subjects feel anything of the presence of the unbidden guests, and 95 per cent. remain entirely free, at least from severe suffering. They may have, perhaps, somewhat of dragging in the right side, feel a slight oppression in the stomach and suffer eructations and occasional anorexia, but on the

*Read before the University of Maryland Medical Society in January, 1905.

whole there is no question of actual disease."

Even with this small percentage of cases that take on actual disease, it seems to me that any case of cholelithiasis is of such importance as to demand surgical aid, whether they have symptoms or not, for in these early recognized cases we can do simple, uncomplicated operations and achieve brilliant results. I voice here the sentiments of Mr. E. S. Bishop, who has recently said in the London Lancet: "It would seem as though the only safe advice which can be given is that gall-stones, wherever they are, should be removed as soon as the diagnosis could be made with certainty," and, further, in support of his statement he says: "No temporizing would be justifiable in the presence of urinary calculus, even though it were not producing active symptoms." Furthermore, the words of Dr. Kehr himself, namely, "That the slight danger of early operations stands in no sort of a relation with the great dangers of the disease itself," are sufficient to urge one on to early interference; at any rate, such patients should be watched with great care, because all of us are seeing more often cases of gall-bladder disease starting as simple cases of cholelithiasis and going on to some of the worst complicated forms of peri-cholecystitis, with possible peritonitis, and requiring immediate and prompt operative interference, with very slim prospects of success. Although the diagnosis in many cases remains, in a measure, obscure—that is, as to the exact character of the trouble going on in the gall-bladder. Still, by giving all the care possible toward obtaining a thorough and complete history, and with careful inspection and examination, we can often be pretty confident as to the character and location of the stone. also as to the degree of inflammation present. For instance, we may say, (a) this case is an example of gall-stones in an undistended gall-bladder, with patent cystic duct; (b) this is a case of chronic obstruction of the common duct by stones, gall-bladder being contracted; (c) this diagnosis shows an acute, purulent cholecystitis and local peritonitis; (d) dropsy of the gall-bladder, or hydrops, which is due to a closure of the cystic duct, either by inflammatory process or an impaction in it of a large stone. (A case I have had as an interesting example is one where the cystic duct was completely blocked off by a large stone, and I removed the gall-bladder intact, with the stone still in this impacted condition in the cystic duct. In this case I did a complete cholecystectomy, with an excellent result, having closed the abdomen without drainage; (e) an acute obstruction of the common duct;) (f) a chronic obstruction of the common duct, not having to do with stone impaction, but being tumor, possibly malignant, or having to do with the head of the pancreas; (g) another variety still of adhesive peritonitis of the gall-bladder, probably without the formation of stones; (h) an example of old inflammatory processes in the gall-bladder.

The above is a varied list of the conditions that we have to do with and in many of them we can say, oftentimes pretty accurately, if we give special attention to the histories in the case, what character of case it is before operation. But it behooves us not to be disappointed if an error in diagnosis is made and the findings at operation are not just what we expected would be present. We must bear in mind that the upper abdomen, so called, has closely associated so many important structures that Dr. William J. Mayo, in an article on "The Association of Surgical Lesions in the Upper Abdomen," says, very justly, "The palm of a hand may cover a serious lesion of any one of these organs, and that, too, at the point of greatest liability; not only so, but any one of this group may start a pathological process which may extend to any one of the others, and with fully as great frequency as occurs under similar conditions in either generative or urinary systems." All these are not fanciful pictures, the author states, but drawn from every-day work. " . . . I have no hesitation in saying, that with an operative experience of over fourteen hundred cases of this description mistakes in exact diagnosis are still common, and in many instances unavoidable. The history may be the only diagnostic resource when the patient comes to us, and we all know how unreliable that may be." Continuing, he says: "If we clearly understand the possibilities of error, we are better prepared to meet complications, or execute a change of front, and operate on one organ when another procedure was planned. In the majority of cases a pathological diagnosis is possible, and one can say with certainty, this is gall-stone disease or this is ulcer of the stomach, but in a considerable minority a surgical diagnosis is the best that can be made. That is, we can say: In this locality is a diseased process which requires oderative treatment, the exact nature of which must be determined by incision. The patient does not come to us for the purpose of having a certain operation performed, but seeks relief from suffering and disability."

It is an undisputed fact that almost all the pathological changes incidental to gall-bladder disease are due to inflammatory processes, which play the leading role in all the

symptoms of cholelithiasis, by which this many-sided disease makes itself known. Upon the degree of infection, upon the number and virulence of the micro-organisms of the *Bacterium coli*, streptococci and staphylococci depends the kind, intensity and duration of the inflammation, which appears as serous, sero-purulent, simple purulent and gangrenous cholecystitis. The typhoid organism is one of importance in this connection, and a careful inquiry should be made in each case as to whether the patient has suffered from typhoid fever. These attacks are oftentimes mild, and are simply attacks of stone colic, but in all events, whether the colic is mild or severe, it seems rational to believe that the infection has taken place; first, directly from the intestine through the common duct into the gall-bladder itself; secondly, from bacteria circulating in the general blood stream and reaching the liver through the hepatic veins; and, thirdly, by the transportation of bacteria from the intestine through the portal circulation; a stone, or many, having been lying quiescent, inflammation starts up which produces the chain of symptoms that occur. As long as the cystic duct remains patent, so that the bile can flow in and out, then the cholecystitis may subside, leaving stones of various sizes in the gall-bladder quiescently reposing, but when the infection has once found a favorable soil, there it creates a *locus minoris resistantiæ*, which it always attacks by preference. In this wise the fact is explained that the cholecystitis appears as a recurrent disease, which in its relapses is much more obstinate than appendicitis.

Dr. Kehr very distinctly states: "By this we do not mean that the colic must be present in its former violence; on the contrary, it often lets up and in its stead appears an obstinate backache, or a nagging, boring, persisting oppression in the stomach. Scarcely another disease runs its course so variably as cholelithiasis and changes its character so suddenly as it. Yesterday the most violent colic raged like a thunderstorm; to-day there has come a calm, which leads the patient quickly to forget the horrible condition of the preceding day. Scarcely has the vomiting disappeared, when the appetite quickly returns, the sunken blanched features become rosy and renew their youth, and no one dreams that the disease is making further progress. And yet, in spite of this external improvement the bile in the gall-bladder turns into pus, the patient has no suspicion what an explosive he conceals in his abdomen. In fact, very frequently the disease, with perverse hypocrisy, conceals under a beautiful mask its horrible features, and unless we surgeons now and then upon a time had the courage, with skilful hand, to tear off the mask, we never would have obtained a conception of the knaveries and wiles of cholelithiasis. It passes still, especially among the laity, as a harmless disease, which is not worth the cost of an operation. How often has this optimistic view of the nature of cholelithiasis caused severe and irreparable injuries, and how frequently a flourishing life has been blighted which might have been saved by an early operation!"

The inflammatory process, which takes place in the gall-bladder, must be regarded in a measure as the expelling force which sets the stone in motion, and forces it, if not too large, to pass the cystic duct, on into the common duct. The stone, if of large size, may give rise to an acute obstruction of the common duct which occasionally ruptures through into free peritoneal cavity, or after the formation of a cholecystoduodenal fistula into the intestine. (Case V. of my series of cases illustrates this condition, where a large single stone was acutely and tightly impacted in the common duct, and the duct was nearly gangrenous at this point from pressure. In this case there was also an acute cholecystitis and a very tightly distended gall-bladder.) After reaching the common duct, the pathological changes which the stones occasion here are about the same as those which are produced by concretions in the gall-bladder. If the stones are of small size, they are frequently forced on and on by degrees through the ductus choledochus into the intestine, by successive attacks of colic. When they once reach the common duct, however, they are more than likely to lodge there, because the middle portion is more easily dilated than its distal extremity. Once here there is always an interference with biliary drainage, and infected bile and infected secretions from the gall-bladder pass back into the hepatic ducts, and oftentimes set up more or less acute cholangitis, and a later crop or set of stones form in the hepatic or common ducts, above, or in the gall-bladder, and add to the chain, and thus we often find a chain or necklace of stones in the common duct. (Case VII of my series is an excellent illustration of this condition; in this case I found a perfect necklace of stones in the common duct, six in number, I think.)

The presence of these stones in the common duct keeps up a constant irritation, and the cholecystitis which is sure to accompany these cases causes contraction of the gall-bladder, which sooner or later causes marked thickening and infiltration in the gall-bladder wall, which, if carried to its fullest extent, leaves the gall-bladder a

dense, hardened mass of cicatricial tissue, and generally one finds covered over by adhesions which have taken place between the gall-bladder on the one side, and the omentum, stomach and intestines on the other, and I assure you in this condition of affairs one frequently has much difficulty to find his way in this chaos of adhesions down to the gall-bladder and the deeper lying ducts. I saw recently, at the University of Maryland Hospital, with one of the attending gynecologists, just such an obliterated gall-bladder, not much longer than the size of one's little finger. In this case there was but one small stone in the common duct.

Again, stones lying in the common duct often imperceptibly grow and increase, until suddenly a greater swelling of the mucous membrane occurs, possibly from a fresh infection, and a severe attack discloses itself by the occurrence of colic, jaundice, or fever. If it cannot escape into the intestine, then the duct often increases in size to accommodate itself to the increased growth of the stone, or stones, but there is no retrograde wandering of a stone into the gall-bladder. In such attacks as I have just mentioned we often encounter well-marked jaundice—true lithogenous jaundice—occasioned by the obstruction of the choledochus by stone, as distinct from the inflammatory jaundice which we occasionally encounter in acute cholecystitis, and then only when the inflammatory process in the gall-bladder has extended to the mucous membrane of the cystic and common duct.

The general impression that jaundice always belongs to gall-stone disease is incorrect, and no longer is of value. It is absent from 80 to 90 per cent. in all operative cases and the clinician should never hesitate to make a diagnosis of disease of the biliary passages because of the absence of jaundice. That it often is associated with it is true, and attacks of it frequently occur when we have to do with stones in the common duct, which have been driven by inflammation into the continually narrowing portions of the duct, and when there is a large stone in the cystic duct which impairs the patency of the common duct, but seldom does it occur with attacks of cholecystitis and cholelithiasis, where the stones are confined to the gall-bladder.

The occurrence of jaundice, although not necessarily associated as frequently as one was wont to assume heretofore, is still of the greatest importance in obtaining the history to ascertain this important point, also as to whether it appeared immediately with the first cramp attack, as to how long it lasted and as to its intensity, etc. In chronic obstruction of the common duct by stone, it is of especial importance to determine the intensity of the jaundice, for by this means alone we are often in a position to differentiate stone impaction or obstruction from tumor or new growth formation of the common duct. For in chronic choledochus obstruction by stone the jaundice changes become less marked, and often clear up entirely, while in obstruction by tumor it is constantly becoming more intensified, and upon inspection alone this condition of pronounced continuous jaundice oftentimes will lead you to suspect tumor instead of stone. Then, again, in this condition of deep jaundice, upon palpation of your patient's abdomen over his gall-bladder region, a distended gall-bladder oftentimes is made out; this is another very strong proof that the obstruction is due to tumor, because one usually seeks in vain for a gall-bladder where there is a chronic obstruction of the common duct by a stone, since with common-duct stone we generally have a contracted gall-bladder, and a distended gall-bladder with cancer obstruction. This is according to Courvoisier's law and strongly emphasizes it. The law is practically as follows: "The presence of jaundice, with enlargement of the gall-bladder, suggests cancer. On the other hand, with a history of gall-stones and with the gall-bladder not palpable, it suggests stone in the common duct. In cancer there is very often little evidence of inflammatory reaction, which state is so commonly observed in cholelithiasis."

I have seen this law well brought out in most of my cases, and where one has to do with a deepening jaundice, progressive, which is painless, with emaciation and a palpable gall-bladder, one will almost invariably find cancer as the cause.

This I think an important point, since it is a well-known fact that gall-stones act as a stimulus to cancer formation. Courvoisier, of whom it is said that he was the real father of gall-stone surgery, says he found gall-stones present in 87.5 per cent.; Delano Ames in 95.4 per cent of the cases of gall-bladder cancer (Kehr).

According to Schroder, 14 per cent. of gall-stone sufferers develop cancer. There are five cases bearing on this point in my list, and Case III of my gall-stone cases developed cancer and died eight months after. Some very large stones were removed from the gall-bladder.

The above statistics alone speak very strongly in favor of early operations for the removal of gall-stones; even though they are not apparently offending, still they may be quietly laying the foundation for cancer.

The condition of the stools, the color, character and consistency should be noted. The color of the stools should always be

noted; as long as they remain putty-colored, no stone will likely be found in the feces, but as soon as the brown color returns then careful examination of the feces may disclose a stone.

Careful observation should be made as to the appearance of fever; the intermittent form is especially characteristic in lithogenous choledochus obstruction. Careful stomach analysis should be made, to eliminate possible disease pertaining to this organ as a factor in a given case.

The urine and blood should always be carefully examined, especially the latter, for leucocytosis. It has been my experiende to find an absence of leucocytosis in ordinary cholelithiasis, unassociated with cholecystitis, but always a marked increase of leucocytosis after there is any beginning cholecystitis, or whether we have to do with a suppurative condition of the gall-bladder, or an empyema of the gall-bladder; there the leucocytosis, as a rule, is high.

It goes without saying that a general going over the patient is always necessary, and oftentimes throws important light as to whether it will prove an operable or inoperable case. The patient should be stripped and every organ in his body carefully gone over.

Palpation.—Of all the methods which we make use of in a special examination, apart from careful inspection and a thorough and complete general history, palpation is one of the most important. First, this should be directed in a gentle way to the quadrants of the abdomen not affected, and free from the seat of pain; then after getting in a way the confidence of the patient we should direct our palpation to the field of the disease, namely, to the right hypochondrium, and if there are any changes going on, pain and tenderness will be elicited on palpation. The patient should be in the recumbent position, and, better still, with a small pillow under the small of the back. We get a palpable mass most often when we have to do with an acute perforation of the gall-bladder with local peritonitis present. (This has occurred in five or six of my cases.) Or, again, when we have to do with an overdistended gall-bladder, caused by the common duct being obstructed by tumor (an example of this I have in hospital now, and in this case the gall-bladder could be easily palpated.) Exploratory puncture as a means of diagnosis, I mention simply to condemn.

As to the X-ray, this is in no way an aid, since up to the present I believe one has rarely succeeded with the Roentgen rays in demonstrating gall-stones.

The majority of gall-stone cases occur after the age of thirty years, and are found more often in females than in males, and less frequently in the colored than the white race.

Treatment.—As to this the medical and surgical advice is no longer at variance, and I don't believe that the majority of the profession still cherish the delusion that gall-stones can be dissolved, and regard at best operations for gall-stone disease as a last resort. This accusation was made in the following words: "Gall-stone surgery has not received in America the acceptation which it deserves, and, furthermore, I don't believe that the American surgeons accept the statement made in Germany that 95 per cent. of cases of cholelithiasis the patients have not suffered from symptoms. These are autopsy findings and the subjects in these cases, as a rule, can give no histories."

I think we are just waking up to the importance of early operative interference and can cite no better evidence of the medical views than by quoting Dr. Musser, of Philadelphia, who has been prominently identified with the medical side of this question. In his introductory remarks to a paper presented before the Congress of American Physicians and Surgeons, he says: "The era we are about to enter bodes for good. It looks as though we would go through the cycles of activity and inactivity, as in the earlier periods of appendicitis, in the treatment of gall-bladder infections."

This writer especially called attention to the secondary manifestations of cholelithiasis, and strongly urged the early surgical intervention to prevent these sequels and complications. He says: "Let us see to it that the primary ailments are cared for, blocking thereby the oncoming of secondary conditions. Fifty years from now the secondary phenomena will be as rare as those which are secondary to disease now removed early, as cataract, appendicitis, vesical calculus and a score of other conditions. Students of that day will marvel at the reports of cases of the present day." He then predicts that many cases diagnosed as tuberculosis, nephritis and cardiac disease will be prevented because they are merely manifestations of terminal infections, the primary source of which is in the biliary apparatus.

From this it would seem that the surgeons are fast getting the medical men into their way of thinking. Only a few years back it was considered that the so-called ideal operation upon the gall-bladder was to open the organ, remove the stones and immediately close it, as likewise the abdominal wound, without drainage. This method seemed when first proposed an effectual and permanent one, getting rid of the tedious process of drainage and obtaining a firm

closure of the abdominal wound without fear of hernia. It was soon demonstrated, however, by experienced observers that this method failed to give the essential thing indicated—that is, in most, if not all, biliary affections, namely, free drainage of the biliary passages.

Furthermore, when it was found that immediate closure of the gall-bladder might be followed by grave disaster, ideal cholecystotomy was abandoned as an unsafe and possibly a dangerous procedure. This method I used in a few of my earlier cases. I remember distinctly one man upon whom I operated on March 27, 1901. He was deeply jaundiced, and I removed 64 stones from his gall-bladder; found none in the common duct, much to my surprise, as I fully expected on account of his deep jaundice, and closed his gall-bladder, dropped it back and closed his abdominal wound. He made an excellent recovery; his jaundice cleared up at once, and he left the hospital in three weeks quite well. A letter received from his physician only a short while ago, says he has been perfectly well ever since.

The method of operation which provides free and thorough drainage of the gall-ducts and gall-bladder is conceded by the leading surgeons to be the method of choice.

One of the most important steps is to provide a large incision in the abdominal wall, preferably through the right rectus muscle, sufficient to enable one to get the subhepatic space well opened up and well tucked off in order to inspect thoroughly the gall-bladder and the common duct; then, whether the operation resolves itself into either one of cholecystotomy, or cholecystectomy, should be governed by the findings. I am not an ardent advocate for gall-bladder extirpation in all cases by any means; in many conditions it is unquestionably the operation of choice. In my list of twenty-eight cases I have performed six cholecystectomies, and the results in all of them have been most excellent. It is my opinion that when one has to do with a badly infected or possibly gangrenous gall-bladder, with necrosis of the adjacent liver structure and local peritonitis, an extirpation of the offending organ had better be done. In four of my cases of cholecystectomies they were done for this condition. In my other cases of cholecystitis, with gall-bladder stones and common-duct stones, I have removed the stones both from the gall-bladder and from the common duct and drained the gall-bladder freely with gauze drainage and rubber tubing. In a few of my earlier cases I sutured lightly the common duct incision and drained freely the gall-bladder, and in all with excellent results, save in one, a case of a common-duct stone, which was followed by a fatal issue six weeks after operation; cause of death probably a cholangitis.

Three years ago the surgeons were discussing the question of indications for operating in gall-stone disease; the prevailing opinion was then that the stones should be removed as soon as they begin to offend.

The leading question now being discussed is: Should gall-stones be removed whenever they are known to exist, whether they offend or not, provided the patient's general and local conditions are favorable?

This question was brought out by Dr. Maurice H. Richardson, of Boston, in a paper on "The Surgery of the Biliary Tract," read at the Fifty-fifth Annual Session of the American Medical Association.

The two leading questions he asks in his paper are: (1) Should gall-stones be removed even if they cause no symptoms? (2) What is the importance of biliary drainage after opening the gall-bladder or gall-ducts?

In answer to his first question he is strongly of the opinion that gall-stones should be removed whether they cause symptoms or not, and his final argument in the favor of removing gall-stones when they cause no symptoms, are: First, the known safety of the procedure in the given case, and, secondly, the uncertainty of the future in the same case. It will be a matter of almost absolute demonstration in that case what the course of operation will be—an easy and successful operation. What the course without operation in that case will be no man can tell, except that it may be unfavorable. Gall-stones can never do good; they may remain at a standstill, and they may suddenly cause irreparable damage. Operation may do harm, but in the favorable case assumed, it is almost sure to be effective in removing permanently a source of great danger and unbearable suffering."

The second question he answers by stating that in his judgment drainage should be employed in most gall-stone operations and continued until the bile spontaneously ceases to flow through the wound. Immediate closure of the gall bladder without drainage, is, in his opinion, in itself so hazardous that it is to be condemned. He is an ardent advocate for free biliary drainage, and says that well-drained cases almost invariably do well. In his opinion it is a most important step in the surgical treatment. He says that non-drained cases, in his opinion, present a considerable percentage of bad end-results. Furthermore, he thinks that among his patients he finds far better end-results from cholecystotomy than after cholecystectomy.

In an article by Dr. Richardson, published in the Medical News of May 2, 1903, on the "Indications for the Extirpation of the Gall-Bladder," he strongly takes the side in favor of cholecystotomy as against cholecystectomy, and gives the following advantages and disadvantages:

The advantages claimed for cholecystectomy are as follows: (1) The wound heals immediately and the liability to hernia is therefore slight; (2) there is no possibility of any further gall-stones forming in the gall-bladder; (3) there is no possibility of a subsequent cholecystitis; (4) there is no possibility of malignant growths starting in the gall-bladder; (5) the formation of adhesions is reduced to a minimum.

The disadvantages of cholecystectomy claimed by Dr. Richardson are: (1) There is no possibility of draining the biliary passages, except through one of the ducts, and that only after a difficult and unsatisfactory operation (this seems to be his principal argument against it); (2) there is greater danger in the operation; (3) redrainage of the biliary passages is extremely difficult and dangerous.

His principal reasons expressed against cholecystectomy are that free biliary drainage cannot be provided for, and this, taken with the fact that this condition is almost always called for and can be much better carried out when the gall-bladder is left intact, causes him to consider cholecystotomy preferable to cholecystectomy, the latter being at best a far more serious operation.

Before closing I wish to voice my disapproval of a method of dealing with gall-bladder cases which I have seen in some recent publications, principally spoken of in articles on the treatment of gall-stones found as a coincident in abdominal or pelvic operations, viz., while working upon trouble in the lower abdomen it has been suggested to pass the hand up to the gall-bladder region and do a hasty gall bladder operation, through a very small opening, It appears to me that this is a method which does not show proper respect to this field of surgery. If the gall bladder operations are to be done, they are to be undertaken with the full knowledge of the fact that one case in five of all gall-stone cases show a stone in the common duct. Judging from the leading surgeons' opinions as to how best to deal with gall-stone cases, this ideal operation, as cited, cannot in this manner be dealt with in a thoroughly satisfactory way. I fully agree that exploration of the abdominal organs while doing laparotomy for something else is a very right and proper thing to do.

There is one thing of special moment and of great interest, and should not be lost sight of, viz., hemorrhage following operations on the gall-bladder. It is not a primary hemorrhage, this does not generally give much concern, it is consecutive hemorrhage, which is due no doubt to blood changes dependent upon prolonged jaundice—some clinical change which inhibits the fibrin-forming element and thus prevents rapid coagulation. This should be kept in mind, especially in cases where there has been long-standing jaundice, associated with any ecchymotic spots in various parts of the body; in one case in my list the cause of death was directly attributable to this form of hemorrhage. It has been suggested that to overcome and avoid the occurrence of such hemorrhage, or, at any rate, to diminish the chances of the occurrence of such hemorrhage, the patient be put on dram doses of chloride of calcium for some days prior to operation. This practice is advocated by Mayo Robson, and it is supposed to increase the coagulability of the blood.

My list of cases, mentioned in the summary appended hereto, comprise twenty-eight cases: Nineteen cases of cholelithiasis, with cholecystitis in one form or another, the location of the stones being both in the common duct and gall-bladder; in five cases the stones were found in both common duct and gall-bladder, and in the rest of the cases they were confined to the gall-bladder.

There were four cases of malignant disease of the biliary tract; in two of which the patient died following operation, the others were left unimproved.

Of these 28 cases there have been six cholecystectomies, in all of which the patients made excellent recoveries; three were done for acute perforative cholecystitis. or empyema of the gall-bladder, where the gall-bladder was gangrenous; one for chronic cholecystitis, with a large stone in the gall-bladder; one for hydrops of the gall-bladder, with a large distended gall-bladder, due to a large stone impacted in the cystic duct (this is Case XII in my list, a case of cholecystectomy in which I removed the gall-bladder intact, not dislodging the impacted stone in the cystic duct; the patient's abdomen was closed without drainage, and he made a beautiful recovery. I have never opened the gall-bladder to remove the stone, as it has made such a pretty specimen of an immensely distended gall-bladder); and one case for biliary fistula, with stones in the gall-bladder and common duct. In this case the gall-bladder was markedly thickened and infiltrated and I deemed it best to remove it. The cases of cholecystectomy are Nos. 11, 12, 13, 17, 18 and 20.

Four of these cases turned out to be liver abscess; they were sent to me, however, for gall-bladder cases, and were put in this list. All of these were opened and freely drained and made good recoveries, and one case is a case of gumma of the liver and perihepatitis. An exploratory laparotomy was done and no opening of the biliary tract was found necessary. The patient healed under one dressing and is getting well under the use of iodide of potash.

SUMMARY OF CASES.

Case I. Cholelithiasis, with marked jaundice. Operation: Ideal cholecystotomy. Cured.—E. B. U., aged forty-four years. She was referred to me at University of Maryland Hospital. She had attacks of pain in right hypochondriac region at intervals for past seven years; these had increased in severity, and finally occurred on an average of every month, followed by jaundice. Palpation over gall-bladder revealed tenderness; the patient was markedly jaundiced. The abdomen was opened; the gall-bladder found and opened and 44 stones removed; none found in common duct; gall-bladder was sutured and dropped back into the abdomen and abdomen closed without drainage. Patient discharged April 17, 1901. A letter received from her physician in January, 1905, states that there has been no attack of pain since, nor any jaundice; patient has been perfectly well since operation.

Case II. Acute Cholecystitis. Operation: Cholecystotomy. Cured.—A. E., aged thirty-five years. She was referred to me at University of Maryland Hospital for severe attacks of pain in upper abdomen, attended by vomiting, a slight tinge of jaundice and marked tenderness over gall-bladder region on palpation. On April 12, 1901, I opened abdomen, found gall-bladder distended; many adhesions over it; opened and evidence of cholecystitis noted; no stone found; biliary drainage was introduced into the bladder and kept up until it closed of itself. Patient discharged June 1, 1901. Patient seen in 1905 and had had no recurrence of trouble.

Case III. Cholelithiasis, no stone in common duct; five very large stones removed from gall-bladder. Operation: Cholecystotomy. Left hospital as cured. Patient died eight months after operation of cancer of the liver; no evidence of carcinoma seen at time of operation.—C. C., aged forty-nine years. No history of typhoid; history negative as to malignant disease; patient had enjoyed good health up to the present illness; about January 1, 1901, had an attack of grippe and has been sick off and on up to the time I saw her, May, 1901. Her trouble had been pain in abdomen in region of gall-bladder, at times very severe; attacks of excruciating agony, calling for large doses of morphine; slight jaundice noted; she had lost flesh. Under ether abdomen was opened, gall-bladder opened and a quantity of ascitic fluid came out. Four or five very large calculi were taken from gall-bladder. There was no evidence of trouble in the liver of a malignant type that could be seen or palpated at that time. I palpated liver on entire external and under surface, but found no growth in it. Patient recovered from operation, and returned to her home. I saw her again six months' time and found her with marked ascites, and tapped her, drawing off an immense quantity of fluid, after which I could readily palpate the liver border and could easily make out a hard, nodular liver, which to my touch was unquestionably carcinoma, of which she died.

Case IV. Acute empyema of gall-bladder, with perforation and abscess. Large stones found in gall-bladder. Operation: Cholecystotomy. Cured.—S., aged sixty-four years. A large stout, German woman. I was called to see her for supposedly appendicitis, on May 29, 1901. She had marked pain over upper and right side of abdomen; distended mass felt at border of liver, which was tender on pressure, marked rigidity of right rectus and with high temperature and pulse: no jaundice. On following morning at University of Maryland Hospital I opened her abdomen over this mass and came down upon an abscess, which, when evacuated, showed an opening at the bottom which went into the gall-bladder, from which pus also came. Several very large stones were removed from gall-bladder and one found impacted in cystic duct; this was removed and gall-bladder drained. Biliary drainage was kept up for several months until it closed of its own accord. She made an uninterrupted recovery and left hospital four weeks from date of operation.

Case V. Acute impaction of a single large stone in common duct, with acute distention of gall-bladder; common duct at point of impaction about to perforate from pressure. Operation: Choledo-cholecystotomy. Cured.—R. H., aged thirty-two years. Past history of patient reveals no attacks, previously, of gall-stone colic: four years prior to operation patient's history is that she had peritonitis; sick in bed six weeks, no operation was performed. Further states that she had three attacks of renal colic last September; after which she passed a stone the size of a white bean from bladder. Present history: Taken ill on June 16, with acute abdominal pains situ-

ated in the region of the gall-bladder, which grew worse, accompanied with constant and persistent nausea; pain grew intense, localized itself in right side over gall-bladder region, ran up in shoulder on right side; attack was ushered in by a chill. No jaundice present; tenderness noted over gall-bladder. I saw patient on June 18, advised immediate operation; she was sent to University of Maryland Hospital and on the evening of June 19 I operated. On opening abdomen a tightly distended gall-bladder was noted; passing the finger down in the foramen of Winslow I found a large stone impacted in the common duct. The gall-bladder was opened and the stone in the common duct cut down and removed. The opening in the common duct was closed up by two catgut sutures; gall-bladder was drained with tube and gauze drainage. Patient made an uninterrupted recovery. The contents of the gall-bladder were seropurulent, but no organisms grew from cultures taken at time of operation.

Case VI. Cholelithiasis with empyema of gall-bladder. Three stones of very large size, one inch in diameter, removed. Operation: Cholecystotomy. Cured.—R. T., aged fifty years. For over a year patient has had symptoms of pain referable to her gall-bladder region; no definite attacks of hepatic colic; no jaundice; two weeks prior to operation she was taken ill with severe pains in right side, associated with vomiting, and this grew worse; she was brought to me by her physician for supposed appendicitis. Upon examination I found a definite mass in her gall-bladder region, exquisitely tender to touch, and evidence of systemic infection; temperature; pulse and leucocytosis; trouble over lower abdomen. I excluded appendicitis and made a diagnosis of empyema of the gall-bladder. Operation July 20, 1901. Under ether, opened down through the right rectus; when peritoneum was opened an enlarged and tense gall-bladder was found; this was surrounded with gauze, subhepatic space well tucked off and gall-bladder opened. There was evidence of gall-bladder infection and a number of large gall-stones were removed, Gall-bladder drained with gauze drainage and rubber tube; wound closed around drainage. Patient became quite ill immediately after operation and the incision was opened to some extent at the top for better drainage; she made an uninterrupted recovery. In May, 1902, she returned to hospital for relief of a ventral hernia which occurred in upper part of cicatrix; this was closed by a radical hernia operation, under ether, with excellent results, and she has been perfectly well ever since.

Case VII. Choledo-cholelithiasis. Five stones in common duct; six to eight in gall-bladder. Operation: Cholecystotomy; choledochotomy. Cured.—B. S. T., aged forty-nine years. Present trouble dates back six years, beginning with violent attacks of pain in gall-bladder region, with vomiting and chills; during first year had a period of rest from trouble for five months; since then attacks have been more frequent and ten days have been the longest period of intermission for some time; with these attacks she always has jaundice; last six months pain has been very severe; relief obtained by use of morphine. Loss of weight considerable; patient weighed a year ago 179 pounds, at present 130. I was called to see her, being told that it was a case more than likely of cancer of the liver. I found a patient jaundiced and obtained the beforementioned history. In between the attacks the jaundice would clear up almost entirely. She was operated upon November 15, 1901, at the University of Maryland Hospital. A necklace of stones in the common duct, five in number, and from six to eight in the gall-bladder were removed. The gall-bladder was drained and the opening in the common duct closed with a few catgut sutures; patient made an uninterrupted recovery; result cured. A letter, received from patient a few days ago, states that she has remained entirely well ever since operation, having had no further trouble whatever.

Case VIII. Cholelithiasis. A number of stones (13 or 14) removed. Operation: Cholecystotomy. Cured.—A. C., aged twenty-nine years. Latter part of October patient was taken with pain in substernal region, or slightly to the right, which lasted for two days; thought it was indigestion; about November 6 she had a second attack, about same as first, pain in same locality; after vomiting attacks would be somewhat relieved, but pain continued, such attacks coming on at shorter intervals. After attacks she would lose appetite and would become jaundiced; operation December 7, 1901; cholecystotomy; drainage; patient made an uninterrupted recovery and has remained well ever since.

Case IX. Single impacted stone of large size in common duct. Operation: Choledochotomy. Died six weeks after operation of cholangitis.—X., aged fifty-three years. Present history: Patient has had trouble with biliary apparatus for fourteen months add at intervals attacks of pain and some slight jaundice, which became worse, ushered in by chills; her temperature following high; had also had trouble for several years with kidneys; urine upon entrance at hospital very scant in amount; full of hyaline and granular casts, with quite a ring of albumin. Leucocyte count, 13,000. She

had been persistently jaundiced for several weeks, much emaciated and had been having chills with high temperature. Date of operation, March 8, 1903. Ether; incision through right rectus; opened, gall-bladder was found tied up by immense number of adhesions and was very much shrunken and thickened, but empty of stones; nothing was found in cystic or hepatic ducts; single stone was found in common duct, which was removed and duct left open. Patient stood operation well. Almost immediately after operation there was a total suppression of urine; following this patient did well and was up on the eighth day. Six weeks from date of operation she developed temperature and the drainage ceased from the biliary tracts; she showed evidences of a cholangitis and died on April 23 of edema of the lungs.

Case X. Cholelithiasis and cholecystitis. Operation: Cholecystotomy. Cured.—D., aged fifty-four years. No history of jaundice; has had some attacks of pain in right hypochondriac region over gall-bladder; the last month pain has been persistent and definitely localized at this point, where there is tenderness on pressure. Operation March 9, 1903; abdomen opened through right rectus; as soon as the abdomen was opened adhesions between gall-bladder and colon were noted, with some thickening of omentum on right side, which was slightly enlarged; 11 stones were removed from gall-bladder, in size from a pea to a cherry; hepatic, cystic and common ducts were normal; gall-bladder well tucked off with gauze, opened and drained. Result, cured.

Case XI. Chronic Cholecystitis. Gall-bladder markedly contracted. Operation: Cholecystectomy No. 1. Cured.—M. N. (colored), aged thirty-four years. Present history: Patient has complained of attacks of pain, jaundice and attacks of vomiting for past year, Date of operation March 18, 1903. Under ether, abdomen opened by right rectus incision, gall-bladder was found thickened and injected and markedly contracted; adhesions to omentum over it; there was a very large gland in the hepatic omentum; there was a stone found situated adjacent to and intimately connected with the common duct; this was dissected away; no stone found in gall-bladder. Gland and gall-bladder removed, the latter on account of thickening and inflammation, a cholecystectomy was done; entire gall-bladder being extirpated down to common duct. Abdomen closed without drainage; patient made an uninterrupted recovery and was discharged from hospital April 18, 1903.

Case XII. Impacted stone in cystic duct, with hydrops of the gall-bladder. Operation: Cholecystectomy No. 1. Cured.—E. M. S., aged thirty-five years. A little over two years ago this patient first noticed present symptoms; two years last February, following confinement, patient noticed present trouble; a lump in her stomach; this so-called tumor gradually grew larger; pain was not constant and not great in severity. Patient came to the hospital on account of nervous trouble and for the tumor, being sent in with a diagnosis of a possible ovarian tumor; states that she has considerable trouble with distended stomach and indigestion. Upon examination a definite palpable mass was revealed, which extended from the region of the gall-bladder well down toward the pelvis, and could be moved about freely in the abdomen; it was not painful to the touch. Date of operation March 25, 1903. Usual incision for gall-bladder operation was made through right rectus and abdomen; found a large, oval, non-adherent tumor connected with under surface of liver by pedicle; there was an enormously distended gall-bladder, in which no inflammatory process had taken place. In the cystic duct a large smooth gall-stone was tightly impacted. The gall-bladder and stone were removed intact, by stripping a portion of the peritoneum from the gall-bladder to act as a covering for the denuded surface of the liver. The stump, which was found by the proximal portion of the cystic duct, was turned in and sutured over, just as one would an appendix stump. Abdomen was closed without drainage. Patient was discharged April 18. Result, cured.

Case XIII. Acute cholecystitis, with empyema and perforation of gall-bladder. Operation: Cholecystectomy No. 3. Cured.—J. J. (colored), aged twenty-nine years. Present history: On March 4, 1903, patient was taken ill with sharp pain in epigastrium, paroxysmal in character, each attack lasting fifteen or twenty minutes. Following this the pain became dull in character and constant, radiating off from the gall-bladder region to his right shoulder. On entering hospital a large definite mass in right hypochondriac region over gall-bladder was noted and a diagnosis of empyema of gall-bladder was made. Leucocytosis, 16,000. Operation April 1, 1903. Opening made down over mass, an abscess opened into and perforation of gall-bladder was noted. There was one large stone in gall-bladder which was practically gangrenous. Adhesions were separated, gall-bladder freed from the liver and extirpated, a complete cholecystectomy being done. After dissecting it away from the common duct, no opening could be found between the cystic duct and the common duct; it was freely tucked with gauze for drainage, and rest of the wound closed. Patient made

an uninterrupted recovery. Left hospital May 1, 1903, cured.

Case XIV. Cholecystitis. Operation: Cholecystotomy. Died one week following operation, from hemorrhage.—G. B. M., aged thirty-four years. Patient had been ill for a long time with obscure symptoms, following typhoid fever. At time of my visit she had complained of great pain in region of her gall bladder, with considerable vomiting, and her doctor and consultant, who were leading medical men in the city, though it had to do with an inflammation of the gall-bladder. Operation July 28, 1903. She was markedly emaciated had lost resisting power by continual vomiting and her condition was very unpromising. Her gall-bladder was uncovered and found somewhat distended. No evidence of any marked inflammation about it and not much thickened; upon opening it, it was found to be filled with a dark thick fluid bile, but no stones were found in either the gall-bladder or ducts, nor any obstruction in the ducts, and very slight evidence of inflammatory trouble in the gall-bladder. Drainage was instituted and she did well for some days, but as the packing was being removed by my assistant, at the end of a week, bleeding was started up, which became persistent, in the gall-bladder and the wound around, and the hemorrhage continued to ooze from this surface and grew more and more profuse. Nothing seemed to stop it, and a fatal issue was the outcome on August 5, from hemorrhage.

Case XV. Carcinoma of common duct and liver. Exploratory operation: Left hospital in same condition.—V. M. J., aged sixty-two years. Brought to me for gall-stone disease. Had been ill with progressive emaciation and pain in the gall-bladder region for some months; evidence pointed to carcinoma, not only of the gall-bladder, but of the liver, and on November 18, 1904, an exploratory operation was done under ether. Carcinoma of the common duct and liver was found and no operative procedure undertaken; abdomen closed; healed under one dressing; patient left hospital in same condition.

Case XVI. Acute infection of gall-bladder. Operation: Cholecystotomy. Cured.—L. H., aged thirty-seven years. Admitted to St. Joseph's Hospital on June 26, 1904, with great pain in abdomen over his right hypochondriac in the neighborhood of gall-bladder; palpation over gall-bladder showed marked tenderness; this had been persistent for some days and associated with temperature, pulse, and leucocytosis. Operation June 26, 1904, cholecystotomy and an appendectomy done for chronic appendicitis. The gall-bladder was found acutely distended; was opened, and a large quantity of dark ropy bile evacuated; no stone found in gall-bladder or common duct. Result, cured.

Case XVII. Empyema of gall-bladder; acute perforation; localized peritonitis. Operation: Cholecystectomy No. 4. Cured.—M. F. (colored), aged twenty-five years. Patient taken acutely ill on July 3, 1904, with severe pain in region of gall-bladder, associated with persistent vomiting; sent into hospital with a diagnosis of appendicitis; pulse 120, temperature 104 deg. F. Leucocytosis, 18,000. History of having had attacks of similar character, of less severity, previously. Operation July 9; ether; right rectus incision. When peritoneum was opened adhesions were found behind the peritoneum and gastrocolic omentum; continuing the separation of adhesions at this region I evacuated a quantity of foul-smelling pus; perforations were found in the fundus of the gall-bladder, as well as perforations off through the gall-bladder into the liver; the gall-bladder was so necrotic and gangrenous that I determined to do a cholecystectomy. In stripping the gall-bladder away from the liver, a large area of liver, immediately adjacent, proved gangrenous and came away with the gall-bladder. The gall-bladder was tied off at the cystic duct where it joins the hepatic duct, and the entire gall-bladder and cystic duct were taken away, with a large section of the liver; bleeding from the liver surface was controlled by gauze packing; wound closed up around the gauze drainage; patient made an uninterrupted recovery and left hospital entirely relieved.

Case XVIII. Chronic Cholecystitis: Cholelithiasis; Gall-Bladder immensely thickened and infiltrated; some sections of it being about an inch and a half thick. Cholecystectomy No. 5. Cured.—R. T. A., age forty-nine years. Had been sick five months with pain in region of gall-bladder and stomach symptoms for some weeks; was under care of Dr. Hemmeter for stomach disorder during that time; he suggested the diagnosis of gall-stone disease. Operation September 29, 1904, at University of Maryland Hospital. Ether; right rectus incision, costal border well below umbilicus; gall-bladder covered by dense adhesions; small intestines and stomach all found adherent to gall-bladder; on separating adhesions gall-bladder was found much thickened, stiffened hard, and stone in common duct; removed entire gall-bladder; tied off the cystic duct with catgut; whipped up the bleeding liver surface with catgut; left gauze tucking in where duct was ligated, and closed abdomen up. When gall-bladder was opened one large stone was

found embedded in the wall of the bladder, which was over half inch thick. Microscopic sections showed it to be a chronic cholecystitis. Result, cured. There was no leucocytosis; no increased temperature or pulse, and a diminution of red blood cells and hemoglobin.

Case XIX. Cholecystitis and Liver Abscess. Operation: Opened down over gall-bladder and drained large liver abscess. Cured.—J. D., aged sixty-five years. Entered University of Maryland Hospital September 16, 1904, with supposed gall-bladder disease. Past history: Thirteen years ago had severe attacks of gall-stone colic, extending over a considerable period of time, during this time there were several dozens of stones passed through the bowel, from the size of a large pea, and larger. Since that time has had pain occasionally in liver region, but no more discharge of stones. About September 1, was taken ill with pain over region of gall-bladder, sharp and lancinating and gradually became, over to the left, a dull, aching sore place, immediately over gall-bladder, which was tender to the touch; considerable vomiting and some little jaundice; two distinct chills, first two weeks sweating and fever going to 102 deg. F. Upon entrance to hospital her urine was found very scant, considerable albumin and casts and her condition was so unpromising that a surgical operation was deemed inadvisable at time of entrance; diagnosis given was suppurative condition, having to do with gall-bladder, probably stones. A marked leucocytosis was noted, 12,400. I was away at the time she was brought to me, and when I returned I found that by careful treatment her condition had improved; her urine had increased in amount and her general condition was somewhat better, but she had marked tenderness over the gall-bladder, and on October 1, under chloroform, the operation was performed; right rectus incision was used; gall-bladder uncovered, no stones were found, very slight amount of inflammation noted in the gall-bladder, but some adhesions were noted above the fundus of the gall-bladder off toward the liver. On freeing these adhesions pus was evacuated which came from the abscess in the tissues of the liver, midway between the gall-bladder and the diaphram and extending up to the diaphram; no stone was found; abscess opened freely and drained. Wound was closed up to the point of drainage and all went well. She left hospital in four weeks' time entirely healed.

Case XX. Choledo-Cholelithiasis. Operation: Cholecystectomy and Choledochotomy. Cured.—P. McD., aged sixty-seven years. Patient has had a biliary fistula for fourteen months, from which he had continuous discharge of bile, and at various intervals a number of gall-stones have worked their way out. The fistula is directly over the region of the gall-bladder, and patient thinks that it came following the use of a brace and bit, that the brace pressed upon him at this point and gave rise to this trouble. He gives a history, however, of having had jaundice some years prior to this supposed injury. I do not regard the patient's theory as having anything to with this trouble. I am of the opinion that he has had gall-stones for some time, and engrafted upon this he has had an infection of the gall-bladder, which went on to suppuration, in other worgs an empyema of the gall-bladder formed and a perforation occurred through the abdominal wall, leaving him this fistula. For many months it discharged pus alone, then after the drainage had gone on for some time, the inflammation in a measure subsided, and the discharge coming from the fistula has since then continued to be clear bile. On October 21, under ether, I opened his abdominal wall to the left of the fistula, through the right rectus muscle, found many dense adhesions tied to the mesentery of the colon and the omentum over the gall-bladder, shutting it in such a way that it was difficult to find. These were separated by ligature, the gall-bladder uncovered, and my hand passed down to the foramen of Winslow, revealing a large stone in the common duct; the gall-bladder was full of stones, 39 in number, and closely adherent to the abdominal wall. A little pouch had formed in the abdominal wall, connecting with the fistula, in which a number of small stones were found. I separted the gall-bladder from the liver, traced it down to its entrance in the common duct, put a large hysterectomy clamp around the fundus of the bladder, where opening went into abdominal wall, cut it loose from the abdominal wall, then took it away close down to the common duct, thereby performing a complete cholecystectomy. A small incision was made over the common duct, and the stone evacuated. The opening into the common duct was sutured with catgut sutures; the raw surfaces on the liver from which the bladder was dissected, sutured up with catgut sutures, gauze drainage let down into the opening into the common duct; the fistulous tract in the abdominal wall was dissected out, and the abdomen closed up around a gauze drainage. Patient had a very tedious recovery; been practically ill ever since the operation, and was delirious for some weeks following operation; tissues around his wound were infected and it was hard to keep the wound

open so that the bile would drain. Slowly he got better; wound closed, save for a small place near the costal border; he has been steadily gaining in strength and getting about the ward for some weeks past; a short while ago it was noted by the assistant that he had a necrosis of the costal border; under cocaine, February 10, I opened down on the costal border of his thorax on that side and found necrosis extended some distance, involving the cartilage corresponding to third or fourth rib. This I removed and curetted out the various sinuses which were connected with one another; tucked it freely with gauze and left the wound widely open. He is doing very well, and March 5, was allowed to go to his home in West Virginia. Patient's condition when he left hospital was most promising, having practically entirely recovered and regained his strength.

Case XXI. Carcinoma of Gall-Bladder and Liver. Operation: Exploratory Laparotomy. There was so much involvement of the liver that no operation was done. Died.—E. L., aged sixty-five years. Patient had been sick for several months, attended with emaciation, jaundice and distended gall-bladder; exploratory incision was made, under ether, but carcinoma was found obstructing common duct, and there was marked involvement of liver, with carcinomatous nodules all through it; abdomen was closed without attempting any operative interference. Patient was very weak when operated upon and died from exhaustion about a week after operation.

Case XXII. Carcinoma Common Duct and Liver. Operation: Exploratory Laparotomy. Unimproved.—A. R., aged sixty-eight years. She had been ill with jaundice, intermittent attacks of pain, with distinct chills, with high temperature following; had been jaundiced for last two months, progressively emaciated and had become very weak from vomiting and want of nourishment, which they had been unable to give her. I was called to see her because she was thought to have gall-stones. She had a progressive jaundice, which had been deepening the last four weeks, and, as said before, she had been steadily losing in weight and in strength. I gave it as my opinion that it was more than likely malignant; advised an exploratory operation. She was sent to University of Maryland Hospital, and under ether I opened abdomen and found above-mentioned trouble; distended gall-bladder and carcinoma of common duct and liver; liver considerably enlarged; no stones found in gall-bladder or common duct. Result, unimproved.

Case XXIII. Carcinoma of Gall-Bladder, Common Duct and Liver. Operation: Exploratory Laparotomy. Unimproved.—J. McD., aged fifty-four years. Called to see patient September 2, 1904; found her with a palpable mass, which was tender to the touch, in the region of her gall-bladder, lower border of the liver could be made out; gall-bladder was distinctly distended; the past history of interest in this case is that thirteen years prior to my visit she was operated on by Dr. L. McLane Tiffany for carcinoma of the breast. Between that time and several months before my visit to her she remained well, no evidence of any metastasis, and as she had gone so long following the operation for breast carcinoma, it seemed rather improbable that she should have a metastasis this late, so she was given the benefit of iodide of potash in large doses, going up to 125 grains three times a day, without any improvement. The early part of November she became markedly jaundiced and showed evidence of increase in palpable mass in her gall-bladder region. On November 9, at University of Maryland Hospital, under ether, exploratory was done, more with a view to clearing up the diagnosis than anything else, as I felt confident then she had carcinoma of the liver and gall-bladder. Exploratory laparotomy revealed marked and very extensive carcinoma of the liver as well as a markedly distended gall-bladder which had nodules of carcinoma in it and an obstructed commou duct, due to carcinoma. The abdomen was closed without any operative interference; wound healed under one dressing and she left hospital unimproved.

Case XXIV. Liver Abscess and Infiltrated Gall-Bladder. Operation: Free drainage of liver abscess by an opening in the front; and in the back by resecting ribs and draining through and through. Cured.—M. P. H., aged thirty-seven years. Patient entered St. Joseph's Hospital, suffering with a large, palpable mass over the gall-bladder region and liver. History was that he received an injury over costal border on right side, which he had had treated at Hopkins Hospital for fractured ribs; did not improve, but continued to have trouble from date of his injury until time I saw him. Shortly after his so-called injury he gives a history of having had a mild attack of dysentery. Under ether, an opening was was made down in front, just below costal area, just over the liver; this was uncovered, needle passed down into liver and pus evacuated, seeming to the feel as though it were in a large cavity; with the knife I made a good incision through the liver substance down into the abscess cavity, found a huge abscess running down into the back; tenth and eleventh ribs were then resected back toward the spinal column and the liver

incised through until the abscess cavity was reached; this wound was enlarged and fully three quarts of pus were evacuated; a large drainage tube was then run through from this opening through the abscess and out from the opening in front so that there was through and through drainage; another large tube was run down through the front incision into the abscess cavity into the liver; this drainage was kept up for a considerable time; the man made an uninterrupted recovery and left hospital about two months after operation entirely well. No ameba were found in the pus.

Case XXV. Large Abscess of Liver, Following Attack of General Peritonitis, Due to a Perforated, Gangrenous Appendix, Which Opened Through the Diaphragm into the Lung, Free Communication Taking Place Between the Abdominal Incision Made for the Relief of the Gangrenous Appendix and Peritonitis and the Mouth, so That When Abdomen Was Irrigated the Water Came Out Through the Mouth.—F. R., aged eight years. Sent to me for appendicitis; was desperately ill with general peritonitis when he entered hospital and a rapid opening was made into his abdomen. He was found to have a gangrenous appendix, with a general peritonitis, no walling off whatever; pus squirted from his abdomen from all quadrants when the abdomen was opened; he was drained, and several weeks afterward found to have enlargement of his liver and supposed gangrenous pneumonia. He grew very ill, ran a very septic chart, and became emaciated down to a skeleton; about three weeks after operation, while the abdominal wound was being irrigated a quantity of pus came up through his thorax through his mouth, and an immense abscess was evacuated in this way; after this fluid went through from the abdomen through the liver abscess and the lung abscess and out through the mouth. Explanation of it is that a septic phlebitis ran up from the pus of the appendix to the portal circulation, producing a liver abscess; this perforated through the diaphragm and a septic pneumonia occurred which broke down and the liver abscess was drained through the lung; after this free drainage occurred, the patient gained steadily and made a very excellent recovery.

Case XXVI. Large Abscess of the Liver (amebic). Operation: Opened Freely and Drained. Cured.—J. H., aged thirty years. Entered University of Maryland Hospital with a large mass over his liver and gall-bladder region, opening was made down over liver and revealed a large liver abscess; drainage was also made from the side by resecting a rib and drainage instituted there. Examination of pus revealed the ameba. Made an uninterrupted recovery.

Case XXVII. Cholecystitis, Perihepatitis and Definite Nodules Through Liver, Doubtless Syphlitic in Origin. Operation: Exploratory Laparotomy.—H. W., aged thirty-four years. Patient has been sick since August, 1904, with pain in region of gall-bladder, and there was a definite mass (palpable) to be felt in this region. I operated March 2, 1905; under ether, opening made through right rectus, many adhesions separated; an enlarged liver found, no stones in gall-bladder; nodules in the liver were noted; no reason was seen for opening the gall-bladder, so abdomen was closed. Nodules in the liver were thought to be gumma, more than likely. Patient healed under one dressing, and is improving at St. Joseph's Hospital now, under use of iodide of potash.

Case XXVIII. Acute Cholecystitis; 958 Gall-stones Removed from the Gall-Bladder. Operation: Cholecystotomy. Cured.—I. W., aged sixty years. Sent into hospital for appendicitis; I found her with a palpable mass in region of her gall-bladder and suffering with attacks of violent gall-bladder colic; temperature and leucocytosis. Under ether, abdomen was opened, gall-bladder was found adherent to surrounding parts, omentum, stomach and colon were tied up to the fundus of the gall-bladder by adhesions; these were separated off by ligatures and gall-bladder opened; 958 stones removed. A drainage tube was inserted into gall-bladder and gall-bladder tucked off with gauze, not sutured to the parietal peritoneum (as I never make use of the method of suturing the gall-bladder, simply tuck it around with gauze and allow adhesions to shut it off). Abdomen was then closed up around the drainage. Patient made an uninterrupted recovery.

Note:—Since this article was written I have operated upon seven other cases of Gall-Stone Disease, making the number thirty-five instead of twenty-eight. These seven cases consisted of five cases of cholelithiasis where cholecystotomy was done, the stones being removed from the gall-bladder, and the biliary tract drained through the gall-bladder. All these cases made excellent recoveries. In two of the cases I did cholecystectomy for chronic cholecystitis. The condition in each was chronic cholecystitis with gall-stones. The gall-bladder was very much thickened, markedly infiltrated and distended, due to obstruction in the cystic duct. In each case the hardness was so suggestive of carcinoma, that I concluded an extirpation of the gall-bladder was the proper procedure. This makes eight cholecytectomies in my series of cases, all of which recovered.

The Use of Specific Products of Tubercle Bacilli in the Treatment of Tuberculosis.

By James Sawyer, M.D., Asheville, N. C.

Judging from the reports we read in the current literature, the clinical results of the treatment of tuberculosis have materially improved during the last fifteen years. Several factors have undoubtedly been operative in causing the difference between periods prior to 1890 and those of more recent years; and of those, the greater interest on the part of the medical profession, the gradual conviction with many that the disease is, in fact, a curable one, has, no doubt, had an appreciable share by leading to more painstaking methods in details in whatever plan of treatment is adopted.

The methods and remedies employed have been numerous. However, the hygienic and dietetic management, under which is included the so-called "open-air" treatment, and the climatic treatment have long occupied the first place; but it is only in the general appreciation of their value that the profession is practically agreed, for the details of their application are frequently a matter of controversy, even now after about about two thousand years since physicians first resorted to these methods. There is hardly a drug or physical agency that has not been advocated for the cure of phthisis in the course of these many centuries, and most of them were re-discovered and claimed to be curative during the century recently closed.

This unrest and constant search for new and more effective curative agents indicates in an unmistakable manner that, although valuable, the dietetic and hygienic method alone leads to frequent disappointments. Especially is this evident in the meager percentage of enduring cures which have been shown in the various reports from private practice, public hospitals, and special institutions.

There is therefore no wonder that Koch's Tuberculin, when given to the profession in 1890, caused the sensation that it did, coming from an authority so great, and the one that, a few years before, had finally and permanently settled the cause of tuberculosis by the discovery of the tubercle bacillus.

The optimism engendered by this discovery, and the disappointment which followed when it was found to fail in curing all stages and phases of consumption, will for a long time remain an incident in the history of medicine, as well as a warning to future generations of physicians for thoughtful consideration, patient and personal investigations of any new proposition in therapeutics, before it is universally applied, or absolutely condemned; for Koch's tuberculin was evidently deserving of neither of these attitudes. Its diagnostic value became quickly evident, and was so strikingly manifest that it really had but few serious opponents. It is now generally accepted as the most sensitive and reliable agent in diagnosis where a differentiation between tuberculosis and some other affection comes up for consideration.

The therapeutic value of Tuberculin has been, and is still, disputed, but the clinical results in the hands of those experienced in its use still speak unmistakably in its favor, although its strongest advocates had to admit its dangers, against which no amount of precaution seemed to afford absolute protection.

The scope of my paper does not allow me to follow this most interesting subject in chronological order, in which I might show the favorable and shadow sides of the old Tuberculin, and the various attempts to improve the remedy, or to produce modifications that should be free from its disadvantages.

The later products of Professor Koch had more particularly in view the production of bacterial immunity, while an antitoxic effect was sought by Maragliano and others in a serum from animals previously treated with toxins of the tubercle bacillus. For the former purpose Tuberculin R and Tuberculin O were given to the profession in 1897, and soon thereafter a tubercle bacillus emulsion was placed upon the market in Germany, while in this country the watery extract of tubercle bacilli was introduced, with the same end in view. These preparations are not products of the culture fluid, but represent the bodies of the bacillus itself; the several preparations by Professor Koch containing the bodies of the tubercle bacilli in a state of fine division, while the tubercle bacilli extract, as made by Dr. K. von Ruck, contains the proteins after their extraction from the ground-up tubercle bacilli, with water.

It is with the latter preparation that I have sought to augment and improve my clinical results, and adhering strictly to the recommended selection of cases, I have thus far treated only those which had not reached the stage of the disease that is usually designated as phthisis—a fact which explains the comparatively small number which I am able to report upon, the majority of cases coming to Asheville having more advanced lesions.

Before, however, speaking of my results, I anticipate the frequently made objection that the class of cases under consideration also show good results without specific treatment, and that recoveries in this stage

do not necessarily prove the relation of the result to the specific remedy employed.

In regard to such an attitude I shall simply point out that cases which have been known to recover spontaneously, without dietetic and hygienic advantages, or sometimes even under very unfavorable conditions, also belong, as a rule, to the early stages of pure tuberculosis, and that we could urge their recoveries in opposition to hygienic and dietetic methods with equal force. Therefore, under the circumstances, it is a matter of importance to determine what method, or combination of methods, will produce the best results in this class of cases, and likewise to exercise great care that we accept no case as a cure in which the disease has but assumed a stage of latency with absence of symptoms for the time being. For an accurate differentiation between latency and a cure we have but one sovereign diagnostic agent, and that is Tuberculin, and next in importance is the absence of physical signs in the involved lung area. Since the class of cases under consideration are still free from destructive local changes, and have therefore as a rule no bacillary sputum, the diagnosis before treatment must also have been assured, either by preceding clinical course and presence of diagnostic physical signs, or in instances of doubt by a positive reaction to the Tuberculin test.

To save repetition, I will state here that the diagnosis of the cases presently to be mentioned has been assured in this manner in every instance, and that with the exception of but one case the physical signs of the disease have completely disappeared, that there was an entire absence of all subjective symptoms and return of good general health, and in several of the cases I have also had the opportunity of applying the Tuberculin test, to which no general or local reaction occurred. Moreover, there has been no relapse in any case in which the treatment was continued long enough to warrant me in the discharge of the patient. This latter point I consider especially important in cases that have been discharged several years ago, particularly when the patient returned to the locality, occupation, and environment that had obtained under which the disease was contracted or had developed.

Proceeding now to the cases treated, I regret to have had the common experience which obtains when we treat patients at a distance from their homes, namely, that they often discontinue treatment at a period when a recovery, although in sight, has nevertheless not been obtained. Of such cases I have treated eleven with the watery extract of tubercle bacilli, for periods varying between one and three months. In every instance, however, more or less marked improvement, both locally in the affected lung area and as a rule in the general condition, was evident, the latter at times being of a degree that caused the patient to believe himself justified in discontinuing treatment. The degree of such improvement stood in relation to the time of treatment, and the doses that had been reached.

In fourteen other cases I have, however, been able to complete the treatment, and referring again to what I have said heretofore, as to the diagnosis and conditions on discharge, I mention them with a few details.

Case I.—G. W., female, aged nineteen. General appearance good, slight anaemia, and fairly well nourished. Temperature 98 deg. to 99.8 deg., pulse 86 to 94. Some cough and expectoration; in the latter a few tubercle bacilli were found. Slight loss in weight. Physical examination revealed slight dulness in the left apex with rough breathing, also crepitant and moist rales. She was treated with watery extract from May 2 to August 30, 1898, when no further evidence of tuberculosis could be found, the physical signs having disappeared and general health restored; she was therefore discharged as cured. She went home to Florida, was afterward married, and has children. When last heard from, about a year ago, she was in perfect health.

Case II.—W. J. N., male, aged thirty-seven. Emaciated and anaemic. Temperature 99.3 to 104 deg., pulse 96 to 110; frequent hacking cough, but no tubercle bacilli in sputum. Physical examination showed marked consolidation of right upper lobe, weak respiration, and some moist rales in the apex, while below the clavicle and along the anterior border the inspiration was harsh and inspiration prolonged. He was treated with the watery extract from October 8, 1899, to March 3, 1900. At this time all physical signs had disappeared, his physical condition was excellent, and after his discharge he returned to his former home and resumed his occupation. I saw this patient this spring, and he had continued in perfect health.

Case III.—F. H. F., male, aged twenty-one. Mr. F. came under my care May 21, 1900, with a temperature of 104 deg., pulse 160, suffering from an acute pleurisy with effusion of the left side. After recovery from this, slight consolidation in the upper lobe, on the same side, was found. To assure the diagnosis a Tuberculin test was now made, to which he gave a decided general and local reaction. Under treatment with the watery extract the dulness spoken of disappeared, and he was discharged Sep-

tember 21, 1900, in apparently perfect health. In a recent letter this patient writes that he has followed his occupation ever since, and that his health is good in all respects.

Case IV.—K. B., male, aged twenty-four. Somewhat anaemic, of pale, ashy color; had lost welght. Temperature 100.4 deg., pulse 80 to 90, moderate cough, slight expectoration, no tubercle bacilli in sputum. Physical examination showed both upper lobes somewhat consolidated, respiration weak, and a few crepitant rales were noted. Tuberculin reaction was positive. Patient was under treatment in the summer of 1892 for three and one-half months, when he was discharged as cured. His brother, a physician, writes me that he is still in perfect health.

Case V.—R. B. M.. female, aged thirty-six. Appearance and color fairly good. Temperature 99.5 deg., pulse 82 to 94. Complained of cough, slight expectoration, and loss in weight. Sputum did uot contain any tubercle bacilli, but physical examination showed involvement of the left upper lobe and slight consolidation, with the usual auscultatory phenomena. She reacted to the Tuberculin test, and was treated from October 3, 1900, to March 28, 1901, and then discharged with the disappearance of all local signs, and restoration of general health.

Case VI.—R. I. K., female, aged thirty-one. Anaemic, had lost steadily in weight and strength. Had a dry cough, and a moderate amount of expectoration, in which tubercle bacilli were present. Temperature 102 deg., pulse 100. Upper left lobe involved, marked dulness, weak respiration, with moist and crepitant rales. Patient was treated from October 28, 1902, to March 5, 1903. Her improvement was gradual but steady, and on her discharge all physical signs had disappeared and her general health was restored.

Case VII.—N. D., female, aged twenty-three. Came under my care June 7, 1902, after an attack of broncho-pneumonia with pleurisy. She showed slight rises of temperature, and had a slight cough. There being no expectoration, a Tuberculin test was made, to which she reacted. She was treated with watery extract, and discharged September 27, 1902, with all the local physical signs cleared up and general health restored.

Case VIII.—A. R. J.. female, aged twenty-nine. General condition still good, but had lost in weight and strength. Temperature 99.6 deg., pulse 80 to 90. Moderate dry cough, and a small amount of expectoration, in which a few tubercle bacilli were found. Left apex and a small area to the right of the sternum showed percussion dulness, weak respiration, with crepitation on the left side, while moist rales and rough inspiration were present in the area of the right side. Watery extract was given from February 11 to June 19 1903. The tubercle bacilli and the expectoration had disappeared, the physical signs had all cleared up, and general condition improved, justifying the acceptance of a complete recovery, which was later confirmed by failure to react to the Tuberculin test.

Case IX.—E. W. H., female, aged thirty-three. General appearance good, somewhat pale; temperature 100.2 deg.; pulse good, but a little rapid, from 85 to 98. Moderate cough, some expectoration, but no tubercle bacilli found. Tuberculin test positive. Left apex involved. Slight percussion dulness and rough inspiration with crepitant and few moist rales below clavicle. Treatment with watery extract was employed February 3 to May 19, 1903, and at the end of this period there were no more physical signs nor subjective symptoms. I saw this patient in the summer of 1904 and applied a Tuberculin test, with negative result.

Case X.—J. H. H., female, aged thirty-seven. Patient was still in good physical condition when she came under treatment. Her affection had been diagnosed as incipient tuberculosis by the physician who referred her to me. I found slight dulness and few crepitant rales of the right apex. Tuberculin test was employed, by request, and a decided reaction was obtained. Patient was treated from March 9, and discharged on July 10, 1903, when all objective signs and subjective symptoms had disappeared. Later a Tuberculin test was made, with negative results. I had a letter from this lady in the summer of 1004 saying that she was in perfect health.

Case XI.—R. R., male, aged twenty-one. Beyond loss in weight and signs of anaemia patient was in fairly good condition. Temperature 101.5 deg., pulse 90 per minute. Cough and profuse expectoration, but no tubercle bacilli were found. Tuberculin used by request; reaction positive. The area involved was the right upper and a part of the middle lobe, where dulness with crepitant and moist rales and rough respiration were found. The patient had suffered from chronic bronchitis for ten years, and had also chronic postnasal, pharyngeal, and laryngeal catarrh. Watery extract was used from October 9, 1903, to August 1, 1904. His improvement was slow and gradual at first. then more rapid until his discharge in the summer of 1904, when the physical signs and subjective symptoms had disappeared.

Case XII.—A. H. S., female, aged nineteen. Patient very thin, pale, and weak. Came under my care after recovery from a very severe attack of grippe-pneumonia. Temperature 99.5 deg., pulse weak and rapid. She had a dry, hacking cough, with but little expectoration, in which no tubercle bacilli were found. Tuberculin test used; reaction prompt and positive. Right upper lobe was found involved to below the third rib. Her respiration was weak and attended by a few crepitant rales, with interrupted inspiration. She was treated from June 9 to October 1, 1904, at which time she had gained back her lost weight and more, her color had returned, and all her symptoms had disappeared. Physical examination showed nothing abnormal. A Tuberculin test applied later proved negative.

Case XIII.—M. P. M., female, aged twenty-three. General appearance good. Temperature 99.5 deg., pulse 90 to 100, slight cough, a very small amount of expectoration, and no tubercle bacilli. Right apex showed a few crepitant rales and also a few moist rales, with weak breathing. Tuberculin test gave positive reaction. Treated from January 9 to May 27, 1904, when all signs and symptoms had disappeared. Later a Tuberculin test was made, and no reaction could be obtained. I saw this young lady recently, and she was still perfectly well, and another Tuberculin test failed to cause any reaction.

Case XIV.—M. A. S., female, aged 23. Patient consulted me on account of throat trouble, and routine examination showed that the right upper and the upper part of the middle lobes were the seat of structural alterations. Patient gave a history of two attacks of pneumonia. She practically had neither cough nor expectoration, and in what she could supply of the latter no tubercle bacilli could be found. Temperature 99 4 deg., pulse good and generally about 80. Physical examination showed slight dulness in the right apex, weak respiration, and a few crepitant rales. The Tuberculin test was given and a positive reaction obtained. Treatment with the watery extract was begun on July 27, and continued to the present date (October 17, 1904). All physical signs have practically disappeared. The patient is now practically well, but I am still keeping her under observation, and expect to apply the Tuberculin test before her final discharge. [N. B.—This patient was discharged December 29, 1904, after failing to react to the Tuberculin test.]

You will note that I have not a single failure to record in the cases in which I had opportunity given me to actually complete the treatment; and I attribute this to the careful manner in which these cases were selected. Furthermore, I do not hesitate to express my belief that in most of those cases where the treatment was prematurely discontinued the then recorded improvement could easily have become actual and lasting cures.

I have no doubt that my results would have included failures of a more or less striking kind had I accepted advanced cases of phthisis, in which the adverse clinical course is so largely determined by complicating factors secondary to or entirely apart from tuberculosis.

My purpose in the first place was, however, to test and carefully study the action of the remedy in a stage of the disease where we have reason to believe its favorable action may become manifest, if such it has, and while the number of cases is comparably small, the years of observation are correspondingly longer.

For comparison with these results I have records of other patients who came under my care in equally favorable condition, and who were treated in all respects similarly, excepting that the specific remedy was omitted. In many of these cases I have seen subsidence of symptoms and gain in weight and strength which were gratifying to myself and the patients alike; but I have also observed advancing processes and the advent of confirmed phthisis in spite of much longer continued dietetic and hygienic efforts in connection with climatic treatment. Moreover, in the most satisfactory cases the physical signs did not disappear completely, and while the catarrhal signs often subsided, percussion changes previously present were but slightly, or not at all, modified on discharge.

In some of these cases a Tuberculin test was made at the end of the treatment, and almost invariably with the disappointment of a reaction following a small dose, showing that an actual cure had not been obtained, a fact which explains the frequent relapses of apparently cured patients when they leave the climatic resort for their home and resume their previous environment and occupation.

While I have not been able to apply a Tuberculin test in all my cases discharged after treatment with watery extract of tubercle bacilli, in at least half of them the test was applied after a sufficient interval from the discontinuance of the remedy that the question of toleration acquired from a similar bacterial product was practically eliminated, and invariably without effect, although decided doses were used.

In other cases, where the test could not be applied by reason of distant residence, my information as to their continuance in good health justifies me in the belief that

the results obtained will prove permanent.

For the present I feel justified in considering all of these fourteen cases to have made a satisfactory recovery, and I will only add that I have seen no undesirable complications or disagreeable incidents that could be attributed to the remedy; and likewise that the Tuberculin test, whenever I have applied it, proved reliable and without harm to my patients.

Sciatica.*

By J. G. Johnston, M.D., Chester, S. C.

Sciatica is divisible into two classes: True neuritis or inflammation of the sciatic nerve proper, and peri-neuritis or inflammation of the sheath surrounding the nerve. Usually, all painful affections in the distribution of the sciatic nerve are called sciatica. Some of these are true neuralgias, but the majority are perineuritic, as it is the sheath of the nerve that is usually affected.

Authorities state that it is more common in men than women, but in a series of several cases which have come under my observation and treatment, the women were in the majority. Exposure to cold is the most frequent exciting cause, especially after severe muscular exertion. Pressure of tumors or other causes within the pelvis may cause it. May extend from rheumatic focus, as when it extends from lumbago and involves the sciatic nerve. Pressure from mechanical agents and possibly muscular contraction may be a cause. May be due secondarily to bone disease, and other foci of suppuration, besides intra-pelvic pressure.

The leading symptom is pain along the course of the nerve. Felt first and most commonly in the back of the thigh, it sometimes travels up above the hip-joint to the sacro-sciatic notch and down behind the knee, below the head of the fibula, behind the internal malleolus and on the back of the foot. It is often more diffuse and the whole trunk of the nerve can be traced by it, and the foregoing points are named as seats of especial tenderness. While it usually begins gradually, it may often start up suddenly, especially those cases of rheumatic origin. All movement is painful, but more especially walking, and those positions in which the nerve is in a state of tension or compression make it worse. There may possibly be other rare symptoms of neuritis present, as herpes, oedema, or wasting, but personally I have never seen these symptoms except wasting accompanying an attack.

Diagnosis of these cases is usually easy, and can be made correctly by a little care and thought, together with a thorough examination.

Treatment of this trouble is the thing that usually gives us more trouble and worry than the diagnosis. This, as all other forms of neuralgias should first be located as to the cause. The system should be built up by means of tonics, good foods, etc. If malaria be present, quinine is indicated. Rheumatism and gout should receive their appropriate treatment.

In the way of local applications almost everything from a mud bath to a mustard plaster has been used to alleviate the excruciating pain of sciatica, and while some of them do temporary good it is almost always very evanescent. At times I have seen temporary relief result from their use. The application of equal parts of chloroform and tr. aconite in some cases seems to benefit. Some advise the use of Paquelin's cautery, but I have had no experience with it. Ice, too, in some cases, seems to do good, if used early enough.

Under the head of hypodermic administration of remedies for the relief of sciatica, may be mentioned almost as many drugs as could under the head of local applications.

They range all the way from cold water to the hypodermic injection of morphine, At times it is necessary to use morphine in order to get rest, while in others, I have gotten almost as good results by injecting a syringeful of normal salt solution into the sheath of the nerve as near as possible, provided, always that the patient thought he was getting morphine.

Treatment of sciatica, by means of compressing the sciatic nerve has been practiced by some quite extensively. With the patient lying on his face, the most tender spot of the nerve is selected, as at the sacro-sciatic notch, and pressure is made on it with both thumbs, at the same time giving a rotary motion to the nerve. This is kept up from 15 to 20 seconds, followed by 20 minutes rest, after which the process is repeated. Best results are obtained by using this procedure six times a day for two days or longer, until definite cessation from pain is obtained. I know nothing of this method beyond my reading, as I have never tried it.

S. Weir Mitchell and others advocate putting the patient at absolute rest, by splinting the limb with a long splint, thus making it immovable. In this way the limb is at absolute rest and in two or three weeks the patient is nsually so much improved that he can be up and about. At the same time hot water bags are to be kept to the thigh, and some recommend galvanic electricity at the same time, with the negative pole at the bottom of the foot and as large

*Read before the Chester County Medical Society, May, 1905.

as the foot, and the positive under the hip, the patient lying thereon. This to be given daily, five minutes at a time.

One more method that I wish to mention and I am done. This is the method of treatment by dry super-heated air followed by static electricity. Since beginning the use of these two agents in combination, I have had no cause to complain of their not giving me good service. Several of my cases have been treated in this way and every one has shown decided improvement and quickly at that. I consider it much better to let the patient keep going about his business than to keep him flat of his back in bed, provided you can relieve him in the same length of time. The majority of my cases were comparatively easy after two or three weeks treatment and they were allowed to attend to their regular duties during the treatment, so far as they felt able. I have no doubt that they would have improved in the same length of time by being at absolute rest, but unfortunately most of us have to do some stirring, and patients cannot always go to bed and stay there unless it is absolutely impossible for them to keep going. My usual plan of treatment is as follows: The patient has the affected limb bared, so that we can get to it in order to give it a thorough wrapping with Turkish toweling. If the whole limb is affected and painful, I usually place the whole limb in the hot air apparatus. If, however, only the thigh and hip are painful, I sometimes apply the heat locally and to the painful part. The heat is turned on and allowed to burn for 30 or 40 minutes at a temperature ranging from 300 to 500 degrees, depending on the susceptibility of the patient and the amount of wrapping. At the end of this time the heat is turned off, the limb dried thoroughly and sponged with alcohol. They are now taken to the static machine and with a block tin electrode over the painful area, the wave current is given from 15 to 30 minutes. The spark-gap or distance between the discharging rods should be as long as possible; usually, however, four inches answers very well, will give results, and pretty quickly, at that. This routine treatment is continued daily until the patient is free from pain from one treatment to the next, when I begin to lengthen the time between treatments. Usually in two or three weeks they are ready for a longer time between treatments and if you can get them to continue as long as you think necessary, the results are very satisfactory, indeed. Sometimes, however, they get to feeling as they say "as well as I ever did in my life," and then it is hard to convince them that it is necessary for them to continue treatment, though at longer intervals. I have had some, though, who stopped taking treatment before complete and permanent relief was obtained, and they have gotten no worse and are still going about their daily business. I have often been asked which I considered more important and necessary of the two. I have never been able to decide in my own mind about this question. I consider both of very great importance and one supplements the other so nicely and completely that we get much better results, or at least get them much more quickly than by using either of them separately. Both are excellent reducers of inflammation, and while the intense dry heat acts more quickly, the electricity comes after with its wonderful tonic properties, while the nerve is in a receptive condition, and makes the relief more permanent.

The Necessity and Benefit of a Medical Society.

By D. Monroe, M. D., Cameron, Texas.

This is the age of organization, for it prevails everywhere; in every country and in every clime and among every class. The spirit of organization dominates everybody in all stations of life from the mendicants to the captains of industry—even invading "Frenzied Finance."

Some organize solely for the good of themselves, individually and collectively, for what profit and advantage they may clear from such in a financial, social and political way; others for purely mercenary motives—ignoring justice and disregarding the rights of others—but we organize upon a broader plane and higher level and for a nobler purpose; the betterment of ourselves and the benefit of humanity; also, the acquisition and dissemination of scientific knowledge and experience as a gratuitous contribution to the general fund of knowledge for the use and benefit of the society and its members and thus improve each one's own efficiency in relieving pain and staying the hands of death. Besides in convention assembled, we meet old friends and renew their acquaintance; also, make new friends and extend our acquaintanceship, thereby forming new ties as well as cementing old ones, and in this way the society promotes a friendly intercourse among the physicians.

Thus the profession becomes more amicable, one with another, while at the same time more capable and honorable within itself and more useful to the public in the prevention and cure of disease.

Men who shun society and shirk social duties are prone to become stoical and bigoted, and the Doctor, being a man among men, who isolates himself from the

fraternity and refrains from joining his medical society, soon gets to be egotistic and autocratic. He becomes satisfied with his own knowledge of medicine, hence he reads but little, and absorbs nothing from those who do read and fossilizes into such a bigot that he cannot bear to hear the voice of another physician—no, nor even the mention of his good name.

History tells us that Galen of old threw a brother Doctor out of a second story window and broke his neck because the said Doctor did not agree with him. As no man liveth to himself alone, so we should leave no stone unturned, nor means untried to persuade this medical autocrat to connect himself with some medical society and learn the error of his way by teaching him its benefits and its advantages and thus knock some of his arrogance out of him and permit the sunshine of brotherly love to shine into his callous heart.

Besides the Doctor needs the medical society to brush away the cobwebs from his mind and infuse new vigor into it and saturate him with the zeal to know more that he may the more accurately and readily relieve and alleviate the suffering of mankind.

To be of the most benefit to its members, a society should include among its membership the venerable man of varied experience; the man of advanced thought; the pioneer in medicine, as well as the hopeful young man just free from his Alma Mater.

All labor merits wages, is a universally accepted truth; so a Doctor must have a fair compensation for his time and services that he may properly equip himself to practice his profession and also enable him to clothe, house, feed and raise his family creditably. Yet he should not allow himself to be wholly engrossed in his fees, nor let this be his only spring of action, for any man whose only incentive to action is his wages, does a poor job but the Doctor who loves his profession and follows it for that reason, finds no othur avocation so interesting and fascinating, no other life so pleasant and agreeable, no other work so satisfactory and compensative—though the cash does come up short at times, the nonfinancial compensation is oftentimes sufficient to discount the shortage, for the dollar, begrudgingly given as a fee, by the well-to-do, count as naught in comparison with the appreciation of the poor.

Many Doctors could be members of our society and participate therein, who remain on the outside, because of indifference and a want of professional pride. Some commit the same mistake because of the inconvenience of attending society meetings and the stress of non-professional business. And there are a few who are nominally with us at least whose names are on our register, who contribute but little to the success of the Society, except to pay their dues.

While we all cannot devote the same amount of the time and expense and so attend every meeting, yet we should in some way and in some measure do something to help the Society and further the ends in the accomplishment of good. Each one can at least do his whole duty and do it as a blessed privilege and not as a thankless task.

When we all measure up to this standard the Society will grow in favor and extend in influence to every nook and corner of this county and will enroll among its working members every working Doctor.

Then we can charge and collect an admittance fee to our meetings for the privilege of hearing the papers read and profiting by the discussion of each paper by the members instead of a free oyster supper or a swell banquet as a drawing card to get the Doctors to attend.

Treatment of Cranial Depression in the Newborn.

Cranial depression in the newborn is usually the result of some abnormal difficulty in labor or delivery. Baumm (Centralbl. f. Gynakolog.), reports 4 cases in all of which this condition was the result of difficult labor because of narrow pelves, the pressure of the promontorium in 3 cases producing deep depressions in the skull-bone, and in the fourth case causing fracture of the frontal bone. In the first case, troubled how to restore life, he thought of a corkscrew, and after sterilizing the instrument bored into the bone, gave a pull and suddenly the skull was rounded out and the child's breathing and heart action improved for a time, but it soon died. The subsequent section showed no injury to the brain but an internal cranial hemorrhage which, however, seemed to have no connection with the operation. The second case was but a repetition of the first; in the third, however, the child lived and became healthy and strong. In the fourth case as the skull was fractured the corkscrew was more easily inserted, the skull was more readily restored to its normal shape with a complete recovery of the infant. In these cases it may be objected that the child would have lived without the operation, but it is probable that there would have been permanent deformity with defective brain action. Hence Baumm feels justified in recommending the use of the simple procedure mentioned in cases not too difficult and always to strive for the removal of any skull depression.

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RESULTS IN X-RAY THERAPY.

In reading over the results obtained by the various X-Ray operators, both in this country and abroad, one has to allow a certain amount for the author's over-enthusiasm which generally attends successful results in any new branch of therapeutics. In this as well as in other branches where you have a large number of physicians with all grades of experience in this line one finds that the personality and character of the individual also plays an important role. Some making wide sweeping statements, and others who have had perhaps more experience reporting things in a most concise and conservative manner. After a careful review of the various reports we find that the majority are agreed on the following points:

In epithelioma of the skin the earliest effect is a rapid diminution of pain, its cessation being obtained in a few weeks modification of ulceration followed by a change from a yellowish bleeding surface to a freely weeping aspect. The result is almost constant and is always to be expected in ulcers that are surrounded by a thickened projecting border. Next, the intensity of fetor is diminished gradually, the raised edges become flattened and the wound contracts, the deep induration lessens and the tendency to frequent bleeding disappears. Cancer of the tongue has yielded several successes but the necessary technic still offers many disadvantages. Mecaw has cured cancer of the soft palate, and Beclere has cured cancer of the larynx, but these are exceptional.

The cure of a primary cancer of the breast by the X Ray is as yet not a settled possibility but great benefit can be obtained by calming the pain and delaying the progress of the trouble. As a palliative method it deserves a place in the therapeutics of this disease.

When surgical intervention is possible in these cases it is the method of choice to be followed by radiotherapy.

As to results in the malignant conditions of the internal structures of the body one can promise relief of pain and a possible chance of cure. A case in point is one described by Haret. The patient was 65 years old and had refused operation on account of her age. The primary focus was in the cervix uteri invading the vaginal wall. The Radiotherapy was tried with one sitting a week. The lesion was treated with the direct rays, while the vagina was protected by a glass impermeable to the X-Rays. After the second sitting the pain decreased, and after the sixth not a trace of the primative lesion could be either seen or felt. The ulcerated parts were cicatrized. Cases of this kind are rare according to Haret, for surgeons are not apt to subject cervical cancer in the first stages to treatment by the X-Ray.

Tousey recommends the X-Ray in both cancer and hypertrophy of the uterus, stating that one should expose the abdomen and treat through the abdominal wall and also to expose the vagina and cervix by means of a Nott's speculum to the direct action of the rays.

In sarcoma of the skin repeated cures have been reported. In Lupus erythematosis radiotherapy has done no more than has been accomplished by other methods, but it has done as much and the benefit derived required less time.

Lupus vulgaris is best treated by the X-Ray, the results in this disease have been most startling of any of the other conditions treated in this way. The X-Ray is better than Finsen ray in this respect that it takes much less time to effect a cure than the Finsen light.

In the broad category of the pruriginous dermatosis the results have been remarkable the effect being manifested not alone on the pruritis but as well on the concomitant dermatosis. Cases of anal and vulvar pruritus with lichenification the circumscribed neurodermatoses and Hebra's pruritus have all been very favorably influenced and many cured.

In psoriasis cases that have not been benefited by any known procedure have yielded to X-Rays. In acne, results are subject to broad variation, only cases in which other methods have failed should be thus treated, many successes have been reported.

In folliculitis especially of the hairy parts a very satisfactory result is obtained better than by any other method which as is often experienced, are used without success.

In tenia tonsuraus and the parasitic sycoses of the beard and of the nails, the results are far superior to those obtained by any other methods heretofore known.

After reading over the above and keeping in mind that as yet we consider the X-Ray armamentarium rather imperfect by this one means that there is at present a great field for improvement, both in the technique and the apparatus used now for this work, and that we must all look forward to improvement, and finaliy a certain degree of perfection along these lines in the future.

Many surgeons have already recognized the fact that a thorough course of X-Ray treatment after the removal of a malignant

growth is practically a necessity and will increase their percentage of absolute cures without recurrence.

YELLOW FEVER.

The recent outbreak of yellow fever in New Orleans is being watched with unusual interest, both by the laity and the profession of the United States. In 1900 yellow fever appeared among the American troops at Havana, the Surgeon General of the United States army appointed a commission for the purpose of stopping the disease. This commission was made up of the following men: Major Walter Reed, a surgeon, and Dr. Jesse M. Lazear and James Carrol, assistant surgeons in the United States army, all non-immunes; the fourth member was Dr. Aristides Agramonte, a Cuban immune. In 1881 Dr. Carlos Finley put forward the theory that the transmission of yellow fever was by the mosquito similar to the transmission of Malaria. The commission took up the subject from the standpoint, after most accurate and scientific investigation by actual experiment it was determined beyond question that the mosquito of the species stegomyia fasciata was the agent through which the infection was carried from person to person. This was also confirmed by the yellow fever commission from the French government a few months later. Both countries claiming that the disease is not contagious, and that the contagion is not carried by fomites.

The results of the United States Army Yellow Fever Commission are as follows:

1. Bacillus icteroids, sanarelli and the hog cholera bacillus are practically identical.

2. Yellow fever is transmitted by the mosquito stegomyia fasciata.

3. This mosquito may convey the disease as early as on the twelfth day after biting the patient and it may retain the power to do as long as it lives.

4. Yellow fever can be transmitted by the hypodermic injection of blood drawn from a patient in the first, second and fourth days of the disease.

5. Yellow fever is not communicated by fomites.

6. The infectious agent of yellow fever can be passed through a filter that is impermeable to ordinary bacteria.

7. The infectious property of the blood drawn from yellow fever patients is destroyed by a temperature of 55 degrees C. maintained for ten minutes.

Therefore from the above it is imperative that the sick must be protected from the bite of the mosquito by wire screens or mosquito netting and the homes of the non-infected, well guarded in the same manner from this invasion of the disease-bearing insect.

In regard to the specific germ that causes yellow fever the recent and most authentic report is that of the French fever commission operating in Rio de Janeiro, Brazil, in November, 1903, in which the statement appears that, "Neither in the mosquito nor in the blood have we succeeded up to this time in discovering the causative agent of yellow fever."

The manner in which the experiments were carried by the United States Army yellow fever commission are best shown by quoting Dr. Carrol's report: "On the afternoon of July 27th, 1900, I subjected myself to the bite of an infected mosquito, applied by Dr. Lazear. The insect which had been hatched and reared in the laboratory, had been caused to feed upon four cases of yellow fever, two of them severe and two mild; the first patient, a severe case, was bitten twelve days before; the second, third and fourth patients had been bitten six, four and two days previously, and these cases were in character mild, severe and mild respectively. In writing to Dr. Reed that night of the incident, I remarked jokingly that if there were anything in the mosquito theory I should have a good dose. And so it happened. After having slight premonitory symptoms for two days I was taken sick on August 31st, and on Sept. 1st I was carried to the yellow fever camp. My life was in the balance for 3 days, and my chart shows that on the 5th, 6th and 7th days my urine contained eight-tenths and nine-tenths of moist albumen. The tests were made by Dr. Lazear. I mention this particularly because the result obtained in the case does not agree with the twentieth conclusion of Marchoux, Salimbeni and Simond, that the longer the interval that elapses after the injection of the mosquito the more dangerous he becomes. Twelve days, the period above cited, is the shortest time in which the mosquito has been proven to be capable of conveying the infection. It is my opinion that the susceptibility of the individual bitten is a much more patent factor in determining the severity of the attack than the duration of the infection of the mosqoito or the number of mosquitoes applied. On the day that I was taken sick, Aug. 31st, 1900, Dr. Lazear applied the same mosquito with three others to another individual who suffered a comparatively mild attack and was well before I had left my bed. It so happened that I was the first person in whom the mosquito was proven to convey the disease."

It is to be hoped that the profession may not only stop the spread of the disease but

also to determine the specific germ and then produce a serum that will antagonize the disease and place the profession in the same position that it now holds with its antis diphtheritic serum in diphtheria.

OBSTRUCTION OF THE BOWEL.

Intestinal obstruction or ilieus is one of the exceedingly dangerous conditions that may occur at any time and which frequently destroys the life of the victim before any thing can be done. Ilieus is really not a distinct disease but simply the over-shadowing symptom of a great variety of diseases. And no matter what the cause, complete stoppage of the fecal current for a very short while will result in the death of the patient. We usually divide all cases of obstruction into two classes: paralytic and mechanical. The paralytic being due to absence of muscular power in the intestinal wall and the mechanical to some forcible obstruction of the lumen. In the former the caliber of the bowel may be considerably increased, but in the latter the lumen is always contracted if not entirely obliterated. To compare the fecal current to a running brook, the paralytic obstruction simply means no fall, hence no flow, while the mechanical would correspond to an impassable dam against which the current strikes in vain.

But more important than the pathologic division to the average practitioner is the therapeutic division. Therapeutically all cases will fall into two classes: those in which purgatives must be given in large doses and those in which no purgatives must be given at all. Impaction will call for purgatives by mouth and rectum while intersusception will only be made worse by the mildest laxative in either way. So then an early diagnosis is imperative in all cases of obstruction. To give a strong purgative may mean an aggravation of all the symptoms while not to give it may mean the death of the sufferer.

The great diagnostic points about obstruction from simple impaction is that a purgative enema will always bring away some fecal matter and a careful inquiry will bring out the fact that it has developed slowly. In fact impaction is hardly ever the cause of a complete obstruction. The stoppage is hardly ever complete unless there be some contributing factor in the causation. On the other hand obstruction from twists, bands, or intersusception, is acute in its development and complete in its charecter, and it is accompanied with inflammatory symptoms of a more or less pronounced type. In such cases purgatives are not to be given at all. Apart from the history of the case the age is important. Most cases in children require an operation, in people over 50 the medical treatment may relieve. The physical examination is very helpful. The presence of a tumor should be looked for, the amount of distension is noted and the presence or absence of peristaltic waves will help to decide whether operation or medicine will do.

But it is a very great mistake for six or eight doctors to punch a patient's bowels for ten or fifteen minutes apiece. It, perhaps, develops the doctor's muscle, but it is very tough on the patient. A light touch with the entire palm of the hand will discover all that is worth while and it leaves the patient no worse than we found him. The constitutional symptoms are valuable. The pulse is usually high and small, the temperature may be and frequently is normal, the vomiting is more or less continuous, if anything is given by mouth, and has a peculiar sickening smell. The distension is usually marked with localized or general tenderness. Of all the general symptoms, the pulse is the most important. The most reliable of all the guides to the patients' condition is the rate of the pulse, and no matter how he may improve in other ways if the pulse continues high the condition is bad.

A pulse of 100 or more means danger. The temperature is most misleading and should not be considered of much importance. The temperature is frequently normal, even in the most desperate cases. Scanty urine is commonly seen and indican is found on examination. The presence of indican is a comparatively late symptom too late to be of any value. In the vast majority of cases of complete obstruction coming on suddenly surgical treatment is indicated and should be carried out promptly.

CONTAMINATION OF ICE.

The ice used in the various cities and towns in the United States for drinking purposes is obtained either from the frozen rivers or made artificially by the ammonia process. The latter is usually more free from contamination than the latter.

While the supervision over the ice supply of the cities may be exercised to the extent of condemning and prohibiting the sale of contaminated ice for domestic purposes, the sources of subsequent contamination are many and the laboratory is practically only able to control the original contamination of the water from which the ice is made or cut and the storage of the ice in the ice-house. It is therefore important that the consumer must aid in preventing the sale of ice contaminated by delivery by refusing to accept it.

Ice may be contaminated while in stor-

age. It is usually covered with hay straw or sawdust. Of these clean hay is undoubtedly the best; straw often gives a yellow color to the ice and sawdust is very hard to remove from the surfaces. The hay, however, should be fresh and clean. Ice cars may also be a source of contamination, although most companys use special cars for this purpose now. Heretofore cars used to carry manure, brewery slops, coal, etc., were often used for the transportation of ice but this has been largely done away with.

The wagons that deliver ice to the consumer are usually in a very unsanitary condition. Instead of the soggy wood which continually absorbs contamination that cannot be removed metal should be used for lining the wagon. These can be easily cleaned before reloading. Ice should be stored and handled as carefully as any other food product and the common practice of dropping the ice on the streets and sidewalks is highly objectionable. As it is slid across the street or sidewalk covered with manure and sputum containing various disease-producing bacteria which adhere to the ice the most serious contamination results.

The attempt usually made by the delivery men to remove this contamination by washing the ice is without avail for unlike other foods ice cannot be boiled or cooked and it is impossible even to wash it thoroughly because it is of a porous nature. This attempt at washing the ice, even in pure clean water, were used will remove only the gross adherent dirt. But the usually unsanitary manner in which ice is washed before delivery to consumers cannot be too highly condemned. The common practice is to wash the ice with water from the common watering trough found in front of saloons where horses drink together with dogs that frequently bathe in the same. This water is bailed out with a bucket used to water the horses or in the case of many small dealers the water is carried in an old milk can. Some of the smaller dealers use the same wagon for ice in the summer that they use for coal in the winter and being open wagons they cover the ice with an old carpet or blanket containing large quantity of dirt and filth.

The ice obtained from a large river or lake the chances for contamination are not nearly so great as that obtained from smaller ponds. The latter is most often used by hotels, etc.. in many of the Northern summer resorts.

As a result the development of many cases of typhoid fever among the summer visitor which could only be attributed to this state of affairs. Especially is this theory, as to the cause of typhoid in these places made more evident when it has been found out that one or more cases of typhoid fever had been present among the natives whose entire farm drains into the pond from whence the ice is obtained. The typhoid fever germ is not destroyed by freezing and therefore retains in vitality and may be distributed in the ice.

Review of Southern Medical Literature.

Southern Medicine and Surgery, July, 1905.

The Radical Treatment of Certain Rectal Diseases Under Local Anesthesia, with Report of Ten Cases.—Dr. H. B. Cooke quotes the following from Dr. Gant's paper in regard to Dr. Gant's method of sterile water anesthesia.

The technique of injecting the water depends upon the nature of the operation to be performed. When a linear incision is to be made through the skin and subcutaneous tissues for abscess fistula excision of lipoma cysts, etc., the removal of clots from thrombotic hemorrhoids, or of foreign bodies from beneath the integment, the procedure is as follows: A fold of skin at one extremity of the line of incision is caught up between the thumb and forefinger and compressed for a few seconds which diminishes and often prevents the momentary pain caused by the introduction of the needle. The needle is quickly introduced between the layers of the skin and a few drops of water slowly injected which should produce a small localized swelling and anesthesia of the skin at this point. The needle is then introduced slowly further and further along the entire length of the line of the cut to be made and the water gradually injected as before care being taken not to go entirely through the skin. The needle is next plunged deeper into the subcutaneous structures and they are gradually distended until a linear firm whitish ridge like swelling is produced. If the procedure has been properly carried out the skin and underlying structures can now be incised without pain in almost every instance. The writer has also employed this method to anesthetize the line of incision for colostomy, abdominal fixation of the sigmoid and exploratory laparotomy, these operations for obvious reasons being performed at the hospital. For the thrombotic variety of external hemorrhoids it is necessary to make the injection of sterile water between the layers of the skin only when tumor should be quickly transfixed with curved bistoury, laid open, clot turned out, cleansed, and cavity packed with gauze. In cutaneous hemorrhoids the water must be deposited

between the layers of the skin and also in the center of the tumor after which it can be excised and the wound closed with catgut or left to heal by granulation. Large internal protruding or bleeding hemorrhoids can be speedily, and in the vast majority of cases, painlessly removed by either the ligature clamp and cautery or excision operation after the tumor has been so tightly distended with water injected directly into the center that it turns white. The ligature method is the operation of choice to be performed in the office. Prolapsus ani, even though extensive, may be cured in the office and with little discomfort to the patient by distending with water small or large areas of mucus membrane and muscular structures of the bowel which are then removed by the ligature or clamp and cautery. Or on the other hand linear distensions may be done and long segments removed, the wounds being left to heal by granulation or closed with sutures. Ischiorectal follicular or marginal abscesses may be opened with but slight pain by injecting the water between the layers of skin over the abscess, subcutaneous injection being unnecessary. But the writer does not advocate this method of anesthetization for extensive or deep ischiorectal, circumrectal, or pulvirectal abscesses where much cutting and curetting are essential.

Fissure ulceration, epithelioma structure, and congenital malformations about the anus, constipation, fecal impaction, or other affections which require operation to increase the lumen of the anal outlet may be operated on under water anesthesia. In these operations the skin and subcutanous tissues up to the anal margin are distended as previously described, and finally injections are made into the mucosa, submucosa, the external, and if necessary, the internal sphincter muscles until a sufficient degree of pressure is exerted upon the nerve endings to overcome sensation. The injection should be made slowly as rapid distention of the sensitive region may produce considerable discomfort. Then the advantages of water anesthesia are pointed out. The author reports ten cases, pointing out the various conditions in which this method has been most satisfactory in his hands.

The Southern Clinic, July, 1905.

A Study of Burns.—Dr. T. K. Pan Landt divides burns into three classes for practical reasons. The first degree or cumbustio erythematosa is simply a slight inflammatory condition produced by exposure to a temperature somewhat below the boiling point of water and consists of a diffused redness and slight swelling accompanied with a hot smarting itching sensation, often seen in a bather exposed to the hot rays of a summer sun. The anatomical effect is an immediate hyperæmia of the smaller cutanous vessels followed by paresis and passive congestion.

The second degree or combustio bullosa includes that form in which blistering takes place. Burns of this character often produce marked pain and if at all extensive, high fever may result.

The third degree or combustio escharotica. Albuminous coagulation occurs affecting the contents of the vessels and the serous fluid and the albuminous substance of the tissue; greater or less are as all deprived of nourishment and necrosis of tissue fol lows. On the other hand actual carbonization may occur at once.

In cases where the clothing has been ignited the greater portion of the injury is a burn of the first and second degree. During and immediately after the accident the patient is very much excited but becomes quiet after the injuries are dressed. In about five or six hours an apathetic state supervenes with yawning and deep sighs often with deep inspirations and hiccough and then vomiting. Rapidly following this there is a marked restlessness, confusion, clonic convulsions, and finally absolute insensibility. Noisy delirium gives place to a comatous state or the coma immediately follows the former apathy. The respirations are rapid and shallow, the pulse frequent and irregular and within 24 or 48 hours death ensues, either in the midst of the noisy delirium or during the comatous condition. These symptoms may be prolonged or even delayed for several days and then come on in rapid succession. The cause of death is now generally accepted is the nervous shock. If the patient lives till the inflammatory reaction sets in then it seems that death is due to general intoxication.

If the injury is not extensive enough to produce the above symptom death often occurs later, for in intercurrent pneumonia, Bright's disease, erysipelas, pyæmia, etc. The commonest and most dangerous source of irritation to a burn is infection.

For the relief of pain in burns of first degree generally accomplished by dusting the parts with some alkaline powder lead water compress or collodoin.

In burns of the second and third degree carefully cut away the clothing that is loose about the burn and as a temporary measure wrap parts in oiled or waxed paper. When patient has been removed to house or hospital remove oiled paper and all shreds of clothing from the wound. Puncture blisters at most dependent part. Cut away as much charred tissue as possible. Having cleansed the surrounding skin irrigate with a 1-1000

bichloride solution, or 3% carbolic solution and syringe the surface of the burn with in six paroxide of hydrogen. When burn is extensive the best protective dressing is rubber tissue about ¼ of an inch wide spread over the surface and extending well over the edges then sterile gauze and bandage. When granulation is under way the Thiersh method may be used. For extensive burns Hebra's water bath is best if one has the facilities at hand.

The author recommends alum 15% (non-irritating), carbolic acid 2% and ichthyol 5% in a petrolatum base for burns in any stage.

Nashville Journal of Medicine and Surgery, July, 1905.

Two Cases in Which Foreign Bodies were Swallowed and After Producing a Remarkable Set of Symptoms were Extracted from the Rectum.—By C. S. Briggs, M. D.

Gaillard's Southern Medicine, July, 1905.

Pneumonia: A Suggestion as to Treatment,—By L. G. Pedigo, M. D.

Pneumonia From a Personal View-Point.—By John B. Wright, M. D.

The American Practitioner and News, July, 1905.

Treatment of Extra Uterine Pregnancy (Full Grown Foetus Removed).– By Wm. H. Wathen, M. D.

Traumatic Neurasthenia.—By Dr. Carl Weidner.

Virginia Medical Semi-Monthly, July 7, 1905.

Principles of Surgery, Lecture VI, Physiological and Surgical Regeneration—Process of Repair in Wounds—Granulation, Vascularization, Cicatrization and Epidermization—Union by Primary and Union by Secondary Intention.– By Dr. Stewart McGuire, Richmond, Va.

Virginia Medical Semi-Monthly, July 21 1905,

When Shall We Use the Forceps?—Dr. N. H. Reeve, under this title refers only to the use of forceps in ordinary obstetrical work and not to the questions of preferance between forceps version or synphyseotomy. The records of the Philadelphia Lyingin Hospital show that out of 1200 cases of natural labor of which 792 were primipara and 400 multipara, the average duration of labor in primipara first stage was 13 hours and nine minutes, second stage one hour and fifty minutes; while for multipara first stage eight hours and forty-eight minutes, second stage one hour and fifteen minutes. It was also noticed that in a great majority of these cases in which the second stage was considerably longer than the average, the perineum was torn, pointing to the fact that a prolonged second stage does not prevent the perineum from being torn. It is more liable to tear on account of the oedema which occurs in a prolonged expulsion stage. It is rarely necessary to use forceps in first stage, so long as the bag of waters remains unruptured; if necessary at all it is to be determined by the condition of the mother. If the waters have escaped and no progress is made and the patient is becoming exhausted it is proper to dilate the os and apply the forceps. After giving ⅛ grain of morphine, hypodermically administer chloroform, then proceed to dilate using fingers and hand for this purpose, even to the extent of introducing the hand up to the thumb into the uterus, thereby not only getting a thorough dilitation, but outlining the exact position of the head and arranging for the high application of forceps.

Owing to the injury which may result to the cervix or the uterus their use should be delayed until an increasing pulse or temperature or nervous exhaustion demands immediate relief. In addition to these conditions it is proper to apply the forceps during the first stage of labor in case of convulsions and placenta previs.

A prolonged second stage is especially injurious to both mother and child. In this stage every contraction is attended with involuntary effort, and if unusually prolonged brings about anxiety and exhaustion and favor post-partum hemorrhage from fatigue of the uterine muscle. The oedema below the point of pressure reduces the vitality of the tissues and favors laceration and infection. The injury to the child may be trifling, such as extensive succedoneum and slight asphyxias or of grave character as intracranial hemorrhage and death or fatal asphyxia from suppuration of the placenta before the birth of the child.

If after using the oxytocics the pains continue to subside the pulse and temperature increase, then the forceps are indicated. Their use should rarely be deferred beyond two hours if the head ceases to advance and in such cases it should be noted whether the head recedes after a pain because if it remains stationary for considerable time, sloughing from pressure may result.

The deductions from the above should be first the forceps are rarely indicated in the first stage of labor before the membranes rupture; second, it may become necessary to employ the forceps during the first stage when the waters have escaped, on account of the necessary exhaustion of mother and child. Third, in second stage it is proper to apply forceps ½ hour after the head ceases to advance and there is no dispro. portion between passage and passenger-

Fourth, when there is a tight fit between the child and the birth canal the use of the forceps should be delayed, but this delay should not exceed two hours after head ceases to advance. Fifth, if the head neither advances nor recedes the forceps should be applied promptly.

Principles of Surgery, Lecture VII, Vegetative Capacity of Tissue; Repair of Tendonos with Description of Tenorrhaphy and Tenoplasty and Repair of Muscles—Muscle Suturing; Repair of Surface Epithelium with Details of Three Methods of Skin Grafting.—By Dr. Stuart McGuire.

Memphis Medical Monthly, July, 1905.

Quinine in Pernicious Malaria—Dr. A. E. Cox says that of all the remedies in the materia medica there is not one that comes nearer to fulfilling the requirements of a specific than does quinine in malarial troubles; in fact, it is classed as one of the two specifics in our entire list of therapeutical measures. All observers agree that the efficacy of quinine in malarial is due to its destructive influence upon the parasites in the blood. From the observations of Laveran we know that the action of the drug is most marked upon the young, extra corpuscular bodies and very slight upon the parasite during its intra-corpuscular existence. Consequently when quinine is administered only a short time, for instance, three or four hours before the expected paroxysm, it will not prevent its occurrence being within the corpuscles and in that cycle of existence when the drug has the least effect on them and segmentation is not prevented the chill occurs, but when the young segments are set free they are destroyed and thus the explanation of the non-occurance of the next succeeding paroxysm,

There are three forms of pernicious malaria—comatose, algid and hemorragic, for which quinine is prescribed. It is always well to administer quinine in these cases at the earliest opportunity it is of course best to administer it during the defervescent stage and also after other appropriate measures have been given, particularly a mercurial purge, but there is no time to lose waiting for the fever to decline or the secretions to be aroused, as we know quinine is curative, given during the height of the attack.

The size of the dose ordinarily given is about 10 grains, repeated hourly until 40 to 60 grains have been given and this is repeated the next day; each day thereafter from 20 to 30 grains per diem should be given for the next four or five days.

As to administrating quinine in the hemorragic form of pernicious malaria there s much difference of opinion. By resort ing to the use of the microscope this point may be readily decided. In each invidual case if we examine the blood for the presence of the plasmodium malaria and find them, the true antidote quinine hypodermically should be administered; but failing to find them the case should be regarded as one of post-malarial and be so treated.

Bastianelli advises that in any case of hemoglobinuria if the blood shows parasites quinine should be administered freely. Baccelli attributes hemoglobinuria of malaria to be toxins of the hemoparasites. He recognizes four classes: (1) pernicious malaria with hemoglobinuria cured by quinine (2) mild attacks of malaria accompanied by hemoglobinuria, only when quinine is given (3) hemoglobinuria coming on in persons who have had malaria some time ago and not associated with quinine (4) hemoglobinuria produced by small dose of quinine in persons who have had malaria previously. He further says quinine should be continued in spite of the hemoglobinuria if the malarial attack requires it. Osler in his article on malaria under the head of treatment says: "An interesting question is much discussed whether quinine does not cause, or at any rate aggravate the hemogloburnia. We have not yet seen a case in which this condition has occurred as a result of the use of the drug. In an acute malarial infection the patient runs less risk with the quinine." He further says "in the post-malarial forms quinine aggravates the attack."

The author then reports seven interesting cases bearing on the above subject.

Cerebral Forms of Pernicious Malaria.—By Dr. H. L. Sutherland, Rosedale, Miss.

New Orleans Medical and Surgical Journal, July, 1905.

The Mosquitoes of Louisiana and Their Pathogenic Possibilities, with Remarks Upon Their Extermination.—By Dr. W. H. Dupree, Baton Rouge, La.

Empyema.—Dr. T. A. Roy, after aspirating five cases followed by perfect recovery he would not perform this operation today because of the length of the convalescence and the uncertainty of the success of removing even at best but a fraction of the quantity of the pus. The means at our command appealing most to the author's judgment is that of reaction of a rib or as many as the condition requires to properly drain the cavity. The method is simple and finely set forth in all text books—one point not generally known which might be mentioned is the advisability of dispensing with the drainage tube on the supposition that that tube may act as a mechanical irritant to the tissue with which it comes in contact.

The method advised is the Brinkman method which consists in the resection of the rib or ribs in the usual manner and to suture the edges of the skin with those of the pleura and when all signs of pus have disappeared as can be ascertained by physical signs and the general condition of the patient the edges of the wound are freshened and brought into proper apposition to promote union, the wound to be closed by suture or with adhesive strips.

The reason for advising resection instead of aspiration is that in the the author's experience with six cases, five of which were aspirated, taking not less than six months of a tedious convelescence before complete recovery.

The other case was resected, the patient's temperature of 102 for 66 days touched normal the day following the operation and the wound allowed to heal in ten days. In said ten days the patient, a boy of three years, increased five pounds in weight.

Cavernous Angioma of the Scalp.—By Dr. Renny G. Ducote.

Atlanta Journal-Record of Medicine, July, 1905.

Cystitis.—Dr. E. G. Ballinger, after going over the etiology, pathology, symptoms, diagnosis and prognosis, gives the following outline of treatment:

In acute cystitis the chief indications are rest in bed, light diet, bowels kept open, urine rendered bland and unirritating by copious draughts of water, milk, buttermilk whey and lithia water. Hot formentations to the pelvis or hot sitz baths lessen the conjestion and relieve the pain. In women hot vaginal douches should be given once or twice daily. If this does not suffice suppositories may be given containing morph sulp. grain ¼, extract of belladona and extract of hyocyam gr. ¼, cocoa butter grs. vii, one of these introduced into the rectum every few hours for relief of pain. Urotropin or cystogen in 5 to 10 grain doses are valuable to make the urine antiseptic, but are particularly indicated when urine is alkaline.

Irrigations should not be given in hyperacute cystitis, or if there is an acute urethnitis or nephritis, but may be used with decided benefit in the subsiding stage to prevent the cystitis from becoming chronic. The fluid should have about the same specific gravity as the urine. Dissolve one dram of boracic acid, one dram of borax and 30 grains of sodium chloride in a quart of hot water and use for irrigation. The best method of washing out the bladder is with a glass funnel attached to six feet of rubber tubing and connected with a glass catheter in women or a soft rubber one in men. The catheter after being sterilized is introduced and by lowering the funnel the urine flows out and fills it. The tube is compressed and the urine replaced by irrigating fluid which flows into the bladder when the funnel is raised. This prevents the introduction of air which causes pain. The bladder is washed until no shreds, pus, or mucus can be seen.

As the disease becomes chronic the irrigations shonld be made more stimulating as mercuric chloride 1-5000 to 1 8000 potassium permangate 1-12000 to 1-1000 or nitrate of silver 1-4000 to 1000. The chief good, however, comes from the cleansing rather than the stimulating action. Always begin with weak solution and gradually increase.

In cases of urethro cystitis where the pain and tenesmus are very severe prompt relief may be obtained by instellation of 15 to 20 m of 4% cocaine or 1 to 4% nitrate of silver. This should be injected beyond the compressor or urethral muscle. Tubercular cystitis, tumors, chronic ulcers, calculi strictures are treated in the usual manner.

Texas Medical Journal, July, 1905.

Tripartite Mentality.—The annual address before the American Medico Phsychological Association at San Antonia, Texas, April, 1905, by Dr. J. T. Searcy, Tuscaloosa, Ala.

Southern Practitioner, July, 1905.

Prophylaxis of Tuberculosis from the Standpoint of the Physician.—By Dr. J. A. Witherspoon, Nashville.

Prophylaxis of Tuberculosis from the Standpoint of a Layman.—By Captain A. J. Harris, Nashville.

Prophylaxis of Tuberculosis from the Standpoint of the Daily Press.—By. G. H. Baskette, Nashville.

The Texas Medical News, June, 1905.

Some Practical Points on the Use of the Microscope.—By Dr. J. D. Denson.

Mobile Medical and Surgical Journal, july, 1905

Hip-joint Complications in Typhoid Fever.—Dr. McLean Pelts says the case sighted was a girl, age 9, first seen on the 29th day of the disease. Her temperature was running a typical course, ranging from 101¼ to 103 2-5 degrees. Diagnssis of tyyhoid fever was confirmed. She was suffering with a neuritis involving both limbs. After about four weeks treatment temperature became normal and she had every indication of a rapid and complete recovery. Two weeks after the temperature became normal she had a rise of temperature and a return of the neuritis. This continued for about two weeks and then completely abated. The

patient was sent home. After staying at home for two weeks she returned to the hospital complaining of trouble in her hip. Under an anesthetic found great difficulty in reduction and had to resort to the Lorenz method. After reduction found that the least movement would cause the head of the femur to leave the acetabulum. It was then decided to flex and rotate outward the limb and hold it in position by plaster and extension. Plaster was kept on for six weeks. After the removal of the plaster it was noticed that the involved limb was about a half an inch longer and rotated outward. For a long time the medical profession was of the opinion that typhoid fever was a disease only involving Peyers' patches and all symptoms were due to ptomaine poisoning or autointoxication, but now realize that the infection not only involves Peyers' patches, but can and sometimes does involve joints, brain muscles, bone, and differeut organs. With a case of typhoid fever one must ever be on the lookout. It is a pretty well established fact that the primary infection is through Peyers' patches and then the different parts of the system can be and sometimes are attacked by typhoid bacilli. Typhoid monarticular arthritis generally affects the larger joints, such as elbow, knee, shoulder, and frequently the hip. The swelling in hip and shoulder is not readily detected.

Dr. Kern says: "The swelling is probably obscured by the muscular mass about these joints, combined with a tardy increase in the swelling and usually the arthritis arises spontaneously, pus rarely forms and hence suppurative or fistulous openings are rare. Out of 84 cases reported spontanous dislocation occurred in 43, and out of the 43 times of spontaneous dislocation forty times it occurred in the hip, twice in the shoulder, and once in the knee. Therefore, in typhoid fever the physician should examine the joints whenever there is any complaint to see if it is swollen or reddened. Notice also the position in which it is preferably kept by the patient; determine by trying fluctuation if the joint contains an excess of fluid. Where we detect effusion the position of the leg becomes very important as adduction and internal rotation forms spontaneous dislocation. The limbs should be kept in abduction and outward and external rotation. The possibility of this trouble coming on without any premonitory symptoms is sufficient to cause the physician to be ever on the lookout, especially in children.

Hare says, immediately after, or it may be some months after typhoid fever, but very rarely a hypertrophic-osteo-arthritis comes on as a result of a local difficulty produced by the bacillus of Eberth and spontaneous dislocation. This dislocation occurs insidously and announces itself by the pain it causes after the dislocation has occurred. Osler says arthritis is very rare in typhoid fever, but one of the most important points is the frequency with which spontaneous dislocation occurs with arthritis. This dislocation in the majority of cases occurs in the hip-joints.

Abstracts of the Leading Articles of the Month.

Diagnosis of Diphtheria.

Preble, (Progressive Medicine) in reviewing the subject of diagnosis in diphtheria he brings out strongly several very important and instructive points. The diagnosis between the pseudo-membranous angina of syphilis and diphtheria angina, as defined by Campbell, he says, made an impression on him because he has several times seen syphilitic throats mistaken for diphtheria, that the two conditions may closely resemble each other, and that culture will always clear the diagnosis. But while waiting for the culture report, promptly use antitoxin.

Dr. Preble refers to the points brought out in McMahon's article upon, "The Uncertainties of Diagnosis and the Necessity of Early and Vigorous Treatment of Diphtheria." He quotes in full McMahon's deductions under four principal heads, as follows:

(1) "Always examine the throat of a sick child no matter what the symptoms are. To this might be added the caution to examine the nose also and make a culture in all cases of coryza which appear more sick than a simple nasal infection should make them. My observation is that a considerable number of cases which do not receive antitoxin until the fourth or fifth day of their illness, are cases in which the diphtheria began in the nose and later extended into the pharynx."

(2) "Do not trust to the old-fashioned methods because the diagnosis of diphtheria is doubtful. Whenever there is any reasonable grounds for suspecting diphtheria, use antitoxin at once, and use enongh. Too much can do no harm; too little will."

(3) "Immunize all children exposed to contagion."

(4) "Do not delay using antitoxin. 'Do it now.'"

"This points out the two most frequent mistakes in the treatment of this disease, delay and insufficient dosage. If the diagnosis of diphtheria is a reasonable suspicion, inject the patient at once, and if you are in doubt whether to give 2000 or 4000 unites, give the 4000."

On the Study of Fifty Cases of Perforation in Typhoid Fever.

Scott, in the Medical Bulletin, says: These observations are made up from cases occurring in the Pennsylvania Hospital since 1901. Statistics go to show that one death in every three or four depends upon perforation. The time of perforation, as estimated from these fifty cases, shows that the majority occur in the third and the next larger number in the second week, also shows that perforation is more frequent in severe cases, there being twenty-seven out of the fiifty. Ten of the fifty were moderately severe and six mild. The perforations vary much in size, from that of a pin head, to, in an exceptional case, the size of a fifty-cent piece. The perforations usually are single but may be multiple and in one case there were six openings. The symptoms are by far of the greatest importance and especially so to make an early diagnosis. Twenty-five cases had sudden localized pain; three had pain of sudden onset soon becoming general; six complained of no pain, and in five there was no previous history of symptoms. The pain varies in location, in some cases being referred to the right iliac region, in others to the right side, about the lower zone. In some cases it is well over the left side, in others over both lower zones and in some it is general all over the abdomen. It is also interesting that a great many cases, in which perforation has occurred, have complained of pain during the early progress of disease.

Tenderness on pressure was present in at least seventy-five per cent. of the cases. Distention was present in about one-half but was, of course, a late manifestation of the condition. Chills were present in but fifteen per cent. The temperature may drop suddenly at time of perforation or soon afterward, with a sudden rise; or there may be a slight fall with a sudden rise; or there may be an immediate rise with a subsequent fall, or no change may be noticed. The leukocytes rose above normal in ten cases; there was no change in fourteen and there was a fall in three. In thirty-seven cases the diagnosis of perforation was entirely unsuspected in many. In two cases the hemorrhage was severe and one was operated in many. In two cases the hemorrhage was severe and one was operated upon after it, the perforation being unknown until operated upon. Thirty-nine cases were operated upon with only twelve recoveries. It is interesting to note that there were, during this time, ten cases operated upon in which diagnosis of perforation had been made and the operation proved it erroneous. With the majority of cases the perforation occurs within twelve inches of the ileocæcal. Eighty-six per cent. of all cases occur in the ileum; the appendix and the colon are the next most frequent sites of perforation.

Reflex Disturbances Associated with Adherent Prepuce.

Simon (British Medical Journal) says: Three cases are reported, the first a boy aged eighteen months, who suddenly became unable to walk, complained of pain in the hip increased by attempt at walking; notwithstanding the dragging of the leg, hip disease was not present, inasmuch as after circumscision there was complete and immediate recovery. The second case was that of a boy of fourteen years who appeared to have severe intestinal colic; failure of treatment by ordinary methods was followed by success after circumscision, no medicines being given. The third patient, three years old, was troubled with night-screaming and complained of pain in the abdomen. Treatment for intestinal indigestion brought no improvement, but the narrowness and adhesions of the prepuce were corrected, and after this there was permanent cessation of the symptoms.

In commenting on the cases, the writer explains the first case as due to an inhibition of the spinal nerves; the second as a reflex pain, and the third case was probably a pain from a distended bladder and erection of the penis, since the child would go to sleep after the urine had been voided.

Treatment of Placenta Previa.

Placenta previa is a sufficiently rare occurrence to render the general practitioner's knowledge of it by personal experience very unlikely. At the same time it is an emergency which every practitioner is liable to meet at any point of his career, and when it does come he will appreciate the value of having, literally at his fingers' ends, some definite, clean cut plan of action which he can promptly an unhesitatingly follow out. Such a line of action can in the nature of things only be furnished for him out of the experience of the specialist, whose larger field of obstetrical work brings him into contact with a larger number of these emergencies. Dr. J. Bolivar De Lee, of Chicago, in Southern Medicine and Surgery, sets forth in clear and concise form for the guidance of the general practitioner the indications for the management of placenta previa, drawn from his own extensive experience.

The diagnosis of placenta previa is not hard. A painless, causeless, uterine hemorrhage occurring in the last three months of pregnancy almost always indicates a low insertion of the placenta. If this hemor-

rhage is repeated at intervals the diagnosis is made more probable. As soon as the cervix admits one finger the palpation of the soft mass over the internal os settles the matter.

The author enunciates two general principles for the handling of this formidable complication.

(1) There is no expectant treatment for placenta previa.

(2) A skilled physician must be near the woman from the time the diagnosis is made until she is safely delivered.

There may perhaps be an occasional exception to the first of these enunciations, for example, in a case where the hemorrhage is very slight and the pregnancy not advanced to near term. But here the second principle comes into force. The patient must be in a hospital, in bed, and there await the time of her delivery. If this is refused by the patient the conscientious physician will deny her his services, when she may call another practitioner, one in whom the gambling instinct may perhaps be more fully developed.

No account need be taken of the presence of labor, if pains are not present, we induce them. If we are summoned after the labor has begun, the plan to be followed is the same.

Two conditions will, in general, indicate the path to pursue, first the amount of the hemorrhage and second the state of the cervix.

Let us say the labor has begun. If the hemorrhage is very slight one may wait. One may not go away and wait! One must stay at the very bedside and carefully note the flow of blood. In the meantime all preparations are perfected for eventual operation and for combating all possible complications. If the patient loses more than two ounces of blood in two hours, the bag of waters is to be punctured.

If the placenta occupies only the side of the cervix, this little maneuver alone may suffice, the palcenta now being permitted to lie flat on the cervical wall and to retract with it. Further separation of the placenta is prevented by the head pressing it against the uterine wall. The head acts now as a tampon, dilatation proceeds safely. The keynote to the successful treatment of these cases is, Save blood! If, on the advent of labor, or the arrival of the accoucheur the hemorrhage is profuse or even moderate, radical and definite measures to stop the flow must be instituted.

a. If the cervix is completely dilated the child should be delivered at once, by forceps if the head is engaged, by version and extraction if the head is not engaged. This condition must be insisted on, the cervix must be fully dilated.

b. If the cervix does not permit easy and safe extraction, the accoucheur has the choice of two methods, first Braxton Hicks' version and second the use of the colpeurynter.

Which method you will select will depend on your experience and on the gravity of the case. If the woman has lost a great deal of blood you are bound to prevent further loss, and the quickest and most definite method to meet the emergency is Braxton Hicks' version. You now have the case completely under control. If the case is beginning and the patient in good condition you are bound to make an effort to save the child and the rubber balloon, or the "metreurynter" will come in good service.

c. In those rare cases where the cervix is tightly closed so that both Braxton Hicks' version and the metreurynter are impossible you may tampon the vagina firmly and wait for sufficient dilatation. For these cases Caesarean section is proposed.

The treatment of the third stage, the placental stage. Many women die, after having been adroitly conducted through the two first stages of labor.

The same economy of blood should be practiced in the third stage. Save blood at all times. If the delivery of the child has been accomplished too rapidly, too early or too forcibly, there will result lacerations more or less deep, in the cervix. The warning, therefore, to deliver slowly and heedfully is not to be disregarded. Even a tiny cervix tear may give rise to a fatal bleeding.

When the child is delived, as in Caesarean section, it should be handed to a competent assistant, and the operator's attention be given wholly to the mother. Even a moderate hemorrhage now demands the immediate removal of the placenta. This is followed by brisk massage and a hot intra uterine douche. The instruments for all complications must have been prepared beforehand. If the bleeding does not immediately cease the utero-vaginal tract must be firmly packed with a long strip of gauze. Gauze one-half yard wide and 13 yards long should be prepared for this purpose. The woman will now have no further hemorrhage and means of combating the anemia may be instituted.

Cancer of the Breast.

Handley (London Lancet) says there are few forms of carcinoma in which visceral deposits are more frequently found. Of 329 cases metastases occurred in 77 per cent. The great frequency of visceral metastases is mainly owing to the extension of

cancerous permeation along the five anastomases, which piercing the parietes, connect the lymphatic plexus of the deep fascio with the subendothelial lymphatic plexuses of the pleura and peritonæum and with the mediastinal and portal glands. The dominant factor is the escape of cancer cells into the serous cavities. In conclusion, the author draws the following practical conclusions: If, when it transgresses the limits of the breast, cancer spreads primarily in the deep fascia, the main operative aim next, of course, to complete removal of the breast and of the axillary glands, should be the removal of as wide an area as possible of the deep fascia. And if the mode of fascial extension is by centrifugal continuous permeation, the area affected is roughly a circle and the area of fascia removed should also be circular with its centre at the point of origin of the original neoplasm. Hitherto too much attention has been paid to the pectoral fascia and axillary glands, with consequent inadequate excision of the deep fascia in a downward direction over the upper part of the abdomen. In order to prevent epigastric invasion the usual incision should be prolonged downwards over the linea alba for about two inches, the flaps undermined, and the fascia excised as far down as two inches below the ensiform cartilage or even lower. This step does not increase the shock of the operation. Excision of the overlying skin and of the underlying muscle must be free, but need not be so extensive as that of the fascia. Removal of the deep fascia is carried out more thoroughly in England than elsewhere, but even there it is deficient in the direction of the epigastrium. Local and intrathoracic recurrence after the operation for cancer of the breast is becoming more and more infrequent, but purely abdominal recurrence in increasing in relative frequency. The author concludes by expressing the firm belief that a recognition of the danger of epigastric invasion and the adoption of precise means for its prevention will bring about a further appreciable reduction in the mortality from mammary carcinoma.

Radical Cure of Inguinal Hernia Without Transplantation of the Cord.

Connell (Medical Standard) describes a method by which an inguinal hernia may be obliterated without interfering with the cord—a proceeding which he believes to be unnecessary.

In practically all cases of inguinal hernia there is found to be a decrease in the obliquity of the canal and a widening of the rings, therefore, it has been reasoned that the radical cure will consist in the formation of new rings, and the construction of a new canal that will have the proper obliquity. This principle, including the transplantation of the cord, which we owe to the work of Marcy, Bassini, and Halsted, has been of the utmost importance in bringing the radical cure to that high standard upon which it now rests. Despite the improvements in the results that have followed these methods, there is still some dissatisfaction, as can be seen from the number of new or improved methods that have been submitted, for example, the method of Ferguson, which is based upon the relationship between the internal oblique muscle and the internal ring.

The transplantation of the cord now seems to be considered by many as an unnecessary and objectionable detail, and in recent work there may be noted a widespread disregard for the older teachings, with a tendency to avoid interfering with the cord, and in operating to attempt to repair and strengthen the anterior wall of the canal instead of making the posterior strong at the expense of the anterior.

After the general adoption of the Bassini type of operation, Woelfler, in 1892, was perhaps, the first to suggest that a radical cure might be effected without a transplantation of the cord. E. W. Andrews, in 1895, suggested such an operation, but did not recommend it. In June, 1899, Ferguson presented his method, which he had performed sixty-four times in the previous eighteen months. At this time he was very positive, and enthusiastically recommended that the cord be left in its normal situation. He said: "Leave the cord alone, for it is the sacred highway along which travel vital elements indispensable to the perpetuity of our race."

Bloodgood, in the same year, in his classic work on hernia, in the Johns Hopkins Bulletin, mentions a number of cases in which he did not transplant the cord, and suggests that in certain cases the cord be left in situ, and in others that the veins alone be transplanted, leaving the vas deferens in its normal surroundings and attachments. He said that after the removal of the veins: "The cord is then such a small affair that it is a question in my mind whether it is necessary to transplant it."

In 1900 Girard, and in 1903 Hoffman, suggested methods similar in that the cord is not transplanted. And in August, 1903, Halsted, of the Johns Hopkins Hospital, presented a method strikingly similar to some of the above mentioned. This list of similar operations, devised independently, for the most part, shows that a breaking away from the typical Bassini procedure is at hand.

It will be readily admitted that all objections to the transplantation of the cord

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are of slight and insignificant importance when compared with the cure of hernia. The problem may be summed up in the question: Is it necessary for the accomplishment of a cure of hernia to subject the cord to such manipulation and dislocation that the functional integrity of the testicle may be threatened? If so, further consideration is practically unnecessary, for the great gain, the cure of hernia, will far outclass any small loss, such as a remote possible interference with the testicle. But, if answered in the negative, then it is certainly far better to leave the cord in its normal situation.

The operation for the radical cure of hernia without interfering with the cord may consist of the following steps:

1. Skin incision.

2. Incision of the aponeurosis of the external oblique, with an exposure of the canal.

3. Dissection and removal of the sac, after the reduction of its contents.

4. Decreasing the size of the cord by the removal of the fat and veins if considered necessary. These steps are the same as in the usual operation for hernia.

5. Repair of the internal ring; the transversalis fascia may be brought together at the upper margin of the ring or the slack may be taken up below.

6. Suture of the internal oblique and the transversalis to the under shelving of Poupart's ligament for its outer two-thirds.

7. Suture of the aponeurosis of the external oblique. This may be done by an ordinary suture, which, with the above steps, comprises the "Ferguson typic operation."

The imbrication, or overlapping of the aponeurosis, as suggested by E. W. Andrews, with different variations and modifications, has been employed quite extensively of late, and apparently with great satisfaction.

Intestinal Perforation in Typhoid Fever.

Harte (Am. Med.) says the surgeon must take the responsibility of operation in suspected perforation in typhoid fever upon himself, however much the physician aids; hence, to be able to appreciate the changes in these patients produced by perforation, he must familiarize himself with the normal aspects of typhoid fever. It is well for a surgeon of a hospital to keep himself tolerably familiar with all the typhoid patients therein, and the attending physician should not resent this familiarity. The most frequent symptom of perforation is pain; sweating, either alone or accompanied by a fall in temperature, not infrequently occurs with the pain. In his experience, the fall in temperature has been fairly constant, varying from 2 to 4 deg. Rigidity of the abdominal muscles is the

most valuable of all the signs. Dulness on percussion is a very uncertain sign, and obliteration of liver dulness is even more elusive. The result of a leukocyte count should not be considered, except in confirming the clinical signs. In operating for perforation, the author sees no reason for changing from general anesthesia by ether. The author has operated 24 times; in two no perforation was present, and both patients recovered. Of the 22 in which perforation had occurred, only 4 recovered, a mortality of 86%.

Eclampsia.

Dienst (N. Y. Medical Journal) regards eclampsia as due to a poisoning of the maternal by the fœtal blood. He was able to demonstrate in fifteen placentæ a communication between the fœtal and maternal circulation. To evoke eclampsia, the blood of mother and child must bear the relation of that of two different species to each other, this necessitating a communication between their respective circulations. In other words eclampsia is due to a transfusion of the heterogeneous blood of the child into the blood of the mother through a pervious placenta. Hæmoglobinuria in eclamptics is to be referred to a destruction of red cells and the subsequent strong development of hæmagglutinins and later of hæmolysins in the blood of convalescent eclamptics seems to be related to the hæmoglobinuria. The author further says that women with considerable quantities of agglutins in the blood are especially prone to eclampsia, as those recovering from chlorosis, scarlatina, diphtheria, tuberculosis, and colds. This would also explain the occasional epidemic character of eclampsia.

Strychnin.

Curtin (Therapeutic Gazette) asserts that he does not deny the usefulness of rational doses of strychnin in certain conditions of cardiac weakness, but more particularly to call attention to the abuse of the remedy. It would be folly to condemn its use in toxic doses in selected cases, or in full doses in emergencies such as occur in the acute infectious diseases unaccompanied by macroscopic changes in the myocardinum or endocardium, or to help tide over such crisis as occur in primary shock or operative shock. He, however, takes issue with those

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Dupuytren's Contraction of the Palmar Fascia.

Knott (Am. Med.) thinks the ring finger is the first to yield to the traction, because of its very small power of independent extension. His experience, contrary to that of Dupuytren's, is that the inflammatory changes in the fascia are distinctly traceable toward the skin. Its nutrition must necessarily be affected as indicated by its glossy appearance. The condition can be palliated to a very considerable degree, but radical cure is impossible. The hand from which the whole of its palmar fascia has been removed can, of course, never attain its former strength or usefulness. The author prefers division by repeated punctures as advocated by Adams. With continuous extension for a sufficient period the position of the fingers can be quite as effectively corrected as by the open method of operation, and less cicatricial tissue will be exposed afterward in the very undesirable position of the cutaneous palmar surface. The slips along the sides of the first and second phalanges should be divided, both above and below the first joint.

Treatment of Pendulous Abdomen.

Creveling (Am. Med.) reports two cases of sagging abdomen, in women of 58 and 34, in which he secured very satisfactory results by resecting a portion of the superfluous belly wall. In one a curved incision beginning a short distance above and to the right of the umbillcus, and extending a maximum distance of 5 cm. (2 in.) to the right of the median line, was carried to the symphysis pubis. This extended through the entire belly wall, into the peritoneal cavity. A corresponding incision on the left was then made, thus removing a section 10 cm. (4 in.) in width, of the anterior abdominal wall. The margins of the wound were sutured in the usual way, and union was complete, No muscle was seen during the operation, and an incision down to the peritoneum 5 cm. (2 in.) to the right revealed no muscle. In the second patient the incisions were begun at instead of above the umbillicus. In both patients the abdomen was restored to normal size and shape, and there has been no tendency for sagging to recur.

especially of the younger school who indiscriminately give doses of one-fifth of a grain or more in the 24 hours, and feels convinced that under such treatment he has failed to see cases recover which formerly under more rational treatment were restored to greater or lesser degree of usefulness. In a heart crippled by disease, the dominant action of the drug—vasomotor stimulation—cannot be made use of. Its direct effect upon the heart is so slight that it seems irrational to employ it in place of such remedies as are known to act more beneficially upon the myocardium and its controlling nerves. As regards the drugs to be used in its stead, he places most dependence upon digitalis and alcohol; digitalis because of its remote as well as of its immediate effects; alcohol because, in addition to being a diffusable stimulant, he believes it to be a valuable tissue food. Strychnin, he states, fulfills neither of these important offices. Besides these drugs, nitroglycerin, citrate of caffein, cactus, strophanthus, ammonia and atropin are of value, and these remedies, selected to meet individual cases when combined in proper proportions, will, he asserts, yield more favorable results than can be obtained by giving large doses of strychnin.

Clinical Experience with Diphtheria Antitoxin.

Fischer (Medical Record) believes that the dose of antitoxin must still be considered empirical, as the quantity of toxin in the system cannot accurately be determined. The proper dose of antitoxin is such as will inhibit extension of the pseudo-membrane, subdue the fever, and check the progress of the disease in general. For a mild case this varies from 2,500 to 5,000 units and if improvement is not evident within 12 hours, this dose should be repeated. If there is a large exudate on the tonsils and pharynx, 5,000 to 10,000 units should be given on the first day and the dose should be repeated within 12 hours unless there is improvement; this dose should be repeated from day to day until all visible exudate disappears, glandular swellings subside, and temperature becomes normal. In cases of laryngeal stenosis, due to diphtheria, the primary dose should be 10,000 units.

The condition and not the age of the patient should be the guide to the dosage as the author has never observed any ill effects after large doses of antitoxin. In some cases the immediate effect of antitoxin on the temperature and pulse is slightly reactive. There may be a rise of temperature from one to two degrees, although in many cases a decided fall may be noted after an injection of from 5,000 to 10,000 units; while the pulse rate is not always affected in some instances a rapid pulse of 160, for example may fall to 140 within twelve hours after the injection. The temperature usually falls after the administration of an adequate dose.

The Clinical Value of Feces Examination.

Salisbury (Clinical Med.) says an uncertainty regarding normal and abnormal processes in the intestines will continue until systematic efforts to examine the feces are made, as they now are, with the gastric contents. The test-diet of Schmidt gives very good results, but the making of the oatmeal gruel is very tedious; the author employs cornmeal instead, this making a gruel without being strained. The consideration of the technic of examination and the interpretation of findings is taken up at length. Although in general, the examination of feces may be unpleasant, it is to be recommended on account of: 1. The accessibility of the material. No apparatus or disagreeable procedure is necessary to secure it, as in the case of the stomach contents. 2. The simplicity of the methods of examination. Only simple methods are of value to the practising physician. One who has had some experience with the work can make the examination in 15 minutes, and but little apparatus is needed. The author says we may confidently hope that with increasing frequency of application, the tests will gain in certainty until diseases of the intestine may be as certainly diagnosed as are now diseases of the stomach.

Railway Spine.

Angell (Medical News) believes that unless the spinal vertebras are dislocated or fractured, the cord is rarely damaged in any way. Concussion of the spine, sprain of its muscles and ligaments, general bruises, or shock are not sufficient to cause serious disturbance of the cord itself. Very rarely severe concussion may cause hemorrhage into the cord. In railway spine the symptoms are out of all proportion to the injuries received. It is a disturbance of the mind, not of the body. The changing of the symptoms from day to day, and shifting of the areas painful to pressure, make a diagnosis of a permanent lesion absurd. The disorder is functional, not imaginary. It is not conscious malingering. The initial disturbance is due to the shock or fear. An imperative idea grows by what it feeds on. The condition is rarely met with in those having well-disciplined or critical minds. It is a delusion and yet a true disorder; the disability is as definite for the time being as though a limb had been lost, and is one for which proper compensation can justly be claimed. The proper treatment is isolation from such surroundings as encourage the patient to dwell on his injury.

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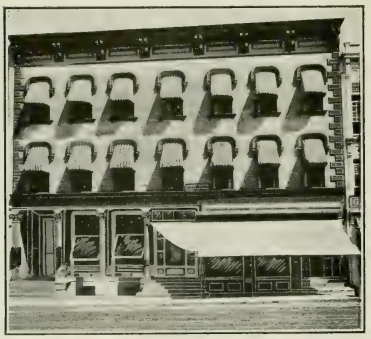

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The Roentgen Rays in the Treatment of Joint Tuberculosis.

J. Rudis Jicinsky, in the N. Y. Med. Jour., Aug. 27, says that chronic tuberculosis of the knee joint apparently runs a much less severe course than that of the hip or spine, and is the form most favorably affected by efficient x-ray treatment. In two cases of tuberculosis of the spine the results were negative, due probably to the fact that the cases were in an advanced stage, or to some fault in the technics with the primitive apparatus in use a few years ago. In knee cases the pain is controlled in a few sittings and "white swelling"—tumor albus—softens with marvelous rapidity. In four cases after the lapse of four months the ankylosis produced under proper support was perfect, and so far no recurrence.

The urine should be examined for albumin in every case of this kind, both before and during treatment, and the x-ray treatment should be carefully watched. With albumin in the urine, a peculiar itching in the exposed joint, and profuse sweating of alkaline reaction, we must stop raying at once, and give the patient a few days' rest. In eight cases of simple tuberculous syno-

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of any degree desired, and in every condition of a patient. PIL. CASCARA COMPOUND-ROBINS, mild and strong. STOMACHIC, TONIC, ANTI-DYSPEPTIC, APERIENT or CATHARTIC, as needed. Always SAFE, THOROUGH, CERTAIN and PLEASANT, in right doses. No MERCURY, STRYCHNIA, nor BELLADONNA.

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vitis a complete cure followed in six weeks, Iodoform emulsion, formalin and glycerin was injected only once in all those cases, and the x-ray was applied daily for ten minutes. In recent cases the emulsion had not been used at all. Two patients have died: one, a child of about ten yerrs of age, after curetting of the lesion proper and x-ray treatment. After six weeks the child developed tuberculous meningitis. Another patient, twenty years of age, died from shock after an amputation. Two cases of three years' standing have as yet yielded only negative results, and three old standing cases are now doing comparatively well under treatment. It is well to observe by means of a fluoroscopic examination from time to time the results of x-ray treatment, and to be constantly on the watch for any special susceptibility of the patient, auto-intoxication, the regulation of the bowels, with all the rules of proper hygiene, good nutrition, light, and fresh air, and to observe all important points in regard to the patient's general health.

Tuberculosis in Children.

Clifford Allbutt (Medical Record), in the course of an address on tuberculosis at Glasgow, referring to tuberculosis in childhood, said: "An opinion has been held by physicians at home and abroad, physicians of the highest authority, that in most cases, perhaps in all, it is during childhood that tubercle establishes itself in the human frame. This opinion I would not propose to you too confidently; yet, as a broad and effective aphorism, I believe it to be not unveracious, and if this be so, it points to a still more jealous care of our children. The passage of tubercle from parent to child is so rare as to be negligible; the disease is usually incurred during the years in which the child inhabits the floor, and inhales its dust. Again the fungus may be taken in with the food, or by licking pencils and slates, by sucking dirty finger-nails, and so forth." Although he had little hope of entirely preventing tuberculosis in childhood, at any rate for some time to come, the speaker thought that when the fact is taken into consideration that inoculation of it in early life may often be the origin and source of an outbreak many years later, no work can be more important than the provision of sanatoriums for delicate children. He suggests that large cities should erect by the seashore a group of cheap dwellings on the "cottage" system, to which should be sent children of consumptive tendencies.

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JAMES WHITWORTH, M.D., Professor of Physiology.
HON. A. B ANDERSON, B. S., L.L.B., Professor of Medical Jurisprudence.

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Miss M. A. Newton, Superintendent.

Epidural Injections in Enuresis in Children.

Kapsammer, in Archiv. f. Kinderheilk, says:

Two forms of enuresis are mentioned, the paretic and the spastic. Apart from faulty training, which is responsible for many cases of nocturnal enuresis, the etiology of the disease varies.

The cause of diurnal enuresis, a form which occurs more rarely, is difficult to explain. In this form involuntary loss of urine occurs only while the child is in upright position.

Cathelin introduced epidural injection as a therapeutic measure in enuresis.

The writer refers to a previous article in which he reported 25 cases cured; in 2 of these there was recurrence, in one after two years, in the other after five months. Since then 20 cases have been treated; of these, 15 were cured and 5 improved.

Physiological salt solution was used in large amount, 10-40 cm. During the injection there is frequently transient pain in the lower extremities. With the exception of vomiting in 2 cases, other unpleasant effects were noted in connection with 500 injections.

A description is given of the technique employed by the writer. Puncture is made slightly above the middle of a line drawn between the cornua coccygea of the sacrum. In each case three injections should be given within a week. As regards the theoretical basis of epidural injection, the writer acknowledges that he is unable to add anything to the hypothesis stated in his first publication upon the subject. It goes without saying that strict asepsis must be observed in carrying out the treatment which has been found to succeed where all other measures failed.

Miscellaneous.

Tri-State (Alabama, Georgia and Tennessee) Meeting.

The seventeenth annual meeting of the Tri-State Medical Society of Alabama, Georgia and Tennessee will be held in Chattanooga, Tuesday, Wednesday and Thursday, September 26, 27 and 28, 1905.

A rate of one fare for the round trip has been secured on account of the Fall meeting of the Chattanooga Fair Association. This organization will have a Horse Show and other attractions, September 26th to 30th.

Membership to this Association is open to all members of the profession in good standing, and a most cordial invitation is extended to all such medical men.

A program of unusual merit is already assured—and those who have not yet sent the subject of their papers should do so at once to the Secretary, Dr. Raymond Wallace, Chattanooga, Tennessee.

The next International Medical Congress will be held in Lisbon, April 19-26, 1906. It is expected that it will be one of unusual importance, for a meeting which will be held in what has always been considered as an out of the way country. Already the titles of papers from some of the most distinguished men of the medical profession have been received. Some of the topics for discussion that have been selected by the executive committee are the following:

SECTION OF DESCRIPTIVE AND COMPARATIVE ANATONY, ANTHROPOLOGY, EMBRYOLOGY AND HISTOLOGY.

Definition, Structure and Composition of Protoplasm.
Origin, Nature and Classification of Pigments.
Cellular Changes in Normal Tissues.
Evolution and Involution of the Thymus Gland.

SECTION ON PHYSIOLOGY.

The Role of Leucocytes in Nutrition.
The Thyroid Secretion.
Renal Permeability.
The Nutritive Value of Alcohol.
The Physiology of the Cytotoxins.
The Blood Ferments.

SECTION OF GENERAL PATHOLOGY, BACTERIOLOGY AND PATHOLOGICAL ANATONY.

What are the Present Scientific Proofs of the Parasitic Nature of Neoplasms, Especially of Cancer?
Preventive Inoculation Against Bacterial Diseases.
Preventive Inoculation Against Protozoic Diseases.
Preventive Inoculation Against Diseases from an Unknown Specific Agent.
The Pancreas and Fat Necrosis.

THERAPEUTICS AND PHARMACOLOGY.

Local Therapeutics in Infectious Diseases.
Separation, from a Physiological and Therapeutic Point of View, of the Different Radiations Produced in Crooke's Tubes and of Those Which are Sent out by Radioactive Bodies.
The Therapeutic Value of Bactericidal Serums.
The Relation Between the Molecular Constitution of Organic Bodies and Their Physiological and Therapeutic Action.

SECTION OF MEDICINE.

The Pathogenesis of Diabetes.
The Pathogenesis of Arterial Hypertension.
The Treatment of Cirrhosis of the Liver.
Cerebrospinal Meningitis.
International Defense Against Tuberculosis.
Meningeal Hemorrhages.

SECTION ON PEDIATRICS.

Spastic Affections of Infancy: Classification and Pathogenesis.
Cerebrospinal Meningitis, Etiology and Treatment.
The Social Struggle Against Rickets.
Orthopedic Surgery in Affections of Nervous Origin, Spastic and Paralytic.
Congenital Dislocation of the Hip.
The Treatment of Abdominal Tuberculosis (Peritoneal).

NEUROLOGY, PSYCHIATRY AND CRIMINAL ANTHROPOLOGY.

Penal Reform from the Anthropologic and Psychiatric Point of View.
Forms and Pathogenesis of Dementia Praecox.
The Relations of Progressive Muscular Atrophy to Charcot's Disease.
Cerebral Localization in Mental Disease.
Education and Crime.
Stigmata of Degeneration and Crime.

SECTION OF SURGERY.

Septic Peritoneal Infections, Classification and Treatment.
Gastrointestinal and Intestinointestinal Anastomoses.

IN THE TREATMENT OF

ANÆMIA, NEURASTHENIA, BRONCHITIS, INFLUENZA, PULMONARY TUBERCULOSIS, AND WASTING DISEASES OF CHILDHOOD, AND DURING CONVALESCENCE FROM EXHAUSTING DISEASES,

THE PHYSICIAN OF MANY YEARS' EXPERIENCE

KNOWS THAT, TO OBTAIN IMMEDIATE RESULTS, THERE IS NO REMEDY THAT POSSESSES THE POWER TO ALTER DISORDERED FUNCTIONS, LIKE

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MANY A TEXT-BOOK ON RESPIRATORY DISEASES SPECIFICALLY MENTIONS THIS PREPARATION AS BEING OF STERLING WORTH.

TRY IT, AND PROVE THESE FACTS

NOTICE.—CAUTION.

THE success of Fellows' Syrup of Hypophosphites has tempted certain persons to offer imitations of it for sale. Mr. Fellows, who has examined samples of several of these imitations, finds that no two of them are identical, and that all of them differ from the original in composition, in freedom from acid reaction, in susceptibility to the effects of oxygen when exposed to light or heat, in the property of retaining the strychnia in solution, and in the medicinal effects.

As these cheap and inefficient substitutes are frequently dispensed instead of the original, physicians are earnestly requested, when prescribing the Syrup, to write "Syr. Hypophos. FELLOWS."

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Surgical Treatment of Prostate-Vesical Tuberculosis.

Progress of Urology in the Diagnosis of Renal Disease.

Painful Cystides.

SECTION OF OPHTHALMOLOGY.

Blepharoplasty.

Serotherapy in Ophthalmology.

SECTION OF LARYNGOLOGY, RHINOLOGY. OTOLOGY AND STOMATOLOGY.

Study of the Opileptogenous Action of Foreign Bodies in the Ear and of Vegetations in the Naso-Pharynx.

The Different Forms of Suppuration of the Maxillary Sinus.

Injections of Paraffin in Rhinology.

Differential Diagnosis of Tubercular, Syphilitic and Cancerous Lesions of the Larynx.

Choice of Anesthesia in the Extraction of Teeth.

Treatment of Alveolar Suppuration.

SECTION OF OBSTETRICS AND GYNECOLOGY.

Conservative Surgery of the Ovaries.

Tuberculosis of the Adnexs.

Symphisiotomy.

Pregnancy and Cancer of the Uterus.

Therapy of Puerperal Infections.

SECTION OF HYGIENE AND EPIDEMIOLOGY.

The Intermediary of Yellow Fever.

The Cooperation of Nations to Prevent the Importation of Yellow Fever and the Pest.

Watering the Streets as a Means Against Tuberculosis.

Recent Additions to the Etiology and Epidemiology of Epidemic Cerebrospinal Meningitis.

SECTION OF MILITARY MEDICINE.

Portable Action of the Soldier During Campaign.

The Purifying of the Country Water.

Emergency Hospitals on the Battlefield.

SECTION OF LEGAL MEDICINE.

Signs of Death from Drowning.

Ecchymoses in Legal Medicine.

Epilepsy in Legal Medicine.

Organization of Medico-Legal Services.

SECTION OF COLONIAL AND NAVAL MEDICINE.

Etiology and Prophylaxis of Beri-Beri.

Etiology and Prophylaxis of Dysentery in Hot Countries.

Mental Diseases in Tropical Countries.

Hospital Ships and Their Function in Time of War.

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Nutrivine.

Cod Liver Oil for generations has been regarded as the great tissue builder. Owing to the rapid oxidation of the oil it is very offensive to the palate. Nutrivine contains all the tissue-building properties of the oil with the offensive flavor eliminated. It does not disturb the stomach and is an admirable preparation for the administration of this remedy. For particulars address Peter-Neat-Richardson Co., Louisville, Ky.

Tonsillitis.

Inflammation in any form attacking the tonsillar region gives rise to symptoms of most distressing character and at the same time provides a most favorable soil for the entry into the system of other infections. It is well to remember that at first this disease is only a local disturbance affecting the capillary system and glandular structures, if promptly and efficiently treated will remain local. The constitutional symptoms, such as fever, headache, etc., only develop when there is considerable infection taken up.

In treatment, the first indication is to increase local capillary circulation. A local remedy must fill two requirements, i. e., a detergent antiseptic and a degree of permanency in effect. Many of the remedies which have been advocated for the various forms of Tousillitis are antiseptic, but they are not sufficiently exosmotic in their action to increase the circulation or else their effect is too transient. Glyco-Thymoline, frequently applied in a 50 per cent. strength with a hand atomizer, produces a rapid depletion of the congested area through its well defined exosmotic property, re-establishing normal passage of fluids through the tissues, promptly relieving the dry condition of the membrane and giving an immediate and lasting anodyne effect. As a gargle a 25 per cent. solution hot may be effectively used, providing the process does not cause undue pain. The external application of cloths dipped in hot water and Glyco-Thymoline in 25 per cent. solution greatly increases the venous circulation.

"The chief reason why Tongaline is such an efficient agent in the treatment of rheumatism, neuralgia, grippe, gout, headaches, sciatica and lumbago arises from the fact that all the salicylic acid it contains is made from the purest natural oil of wintergreen. Hence the patient can take a sufficient quantity of this valuable drug to get its full therapeutic effects, which cannot be done with the synthetic product as the organs of digestion and assimilation will invariably rebel against the salicylic acid made from coal tar before the system is thoroughly under its influence."

Bronchiline.

It is not claimed that Bronchiline is a rare and unusual discovery, nor that there is anything miraculous in its action, but the preparation is the result of years of careful study and is composed of the best selected and most carefully prepared ingredients and will give the action that any physician would expect from the formula, copy of which is on each bottle. If you will try it we believe that you will be pleased with the results. Full particulars upon application. Peter-Neat-Richardson Co., Louisville, Ky.

Stegomyia fasciata has produced an epidemic of yellow fever in certain sections of Louisiana and adjoining states.

Stegomyia punctata has inoculated thousands with virulent malarial germs throughout the balance of the Mississippi Valley.

Tongaline, Mellier, in one of its forms as indicated, antagonizes and destroys the effects of these parasites on account of its extraordinary eliminative action on the liver, the bowels, the kidneys and the pores, whereby the poison is promptly and thoroughly expelled.

The Hygeia Hospital to be Enlarged.

For the second time in two years, the Hygeia Hospital, Dr. J. Allison Hodges' Private Sanatorium, is being enlarged, owing to the increasing demands of the patients.

This is a hospital designed especially for the care and treatment of medical cases alone, and has met with marked success.

The present enlargement will consist of a three-story addition with fourteen additional sleeping rooms.

The bath department will also be remodelled and enlarged.

The hospital will be closed during the month of August ,and will be ready for the reception of patients on September 1st.

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Makes alkaline urine acid.
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Keeps the urinary tract aseptic.

Therefore Indicated in CYSTITIS, PYELITIS, NEPHRITIS, PROSTATITIS, BACTERIURIA, GOUT and RHEUMATISM.

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GLYCO-THYMOLINE FOR SUMMER COMPLAINTS

PROPHYLAXIS—The very nature of artificial foods and cow's milk predisposes to their rapid decomposition. A few drops of Glyco-Thymoline added to each feeding corrects acidity and prevents disorders of stomach and intestines.

TREATMENT—As an adjunct to your treatment of summer complaints, Glyco-Thymoline used internally and by enema corrects hyper-acid conditions, stops excessive fermentation and prevents auto intoxication. It is soothing—alkaline—nontoxic.

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A physician in speaking of Glyco-Thymoline imitations, remarked that they reminded him of Oleomargerine—"which might be used when it was impossible to get butter."

"Imitations are at best poor substitutes and I never use them. I want the results that invariably follow the use of Glyco-Thymoline—genuine." Sole Agents for Great Britain,

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Glyco-Thymoline in Cholera Infantum and Summer Diarrhoea.

Henry Koplik, M. D., Attending Physician at Mount Sinai Hospital, in his recent excellent work upon "The Diseases of Infancy and Childhood," in discussing the treatment of cholera infantum, says:

"The diarrhoea is controlled by irrigation of the gut. The rectum and gut are washed out in those cases in which the diarrhoea is not only persistent, but progressive. The object in washing out the lower bowel in any form of acute gastro-enteritis is two-fold: (a) To remove any residue of feces that may have collected in the lower bowel and rectum, and to stimulate peristalsis and thereby favor evacuation from above. (b) To stimulate the heart and add to the body an amount of normal solution to compensate for the drain caused by the diarrhoea.

"The rectal enemata are given under a pressure obtained by an elevation of at most, two feet from the body. A temperature of 107 to 110 deg. F. (40.5 to 43.3 deg. C.) is the best and most stimulating in these cases. Fully a quart of water is thrown into the rectum in half pint portions. As the half pint flows in, the funnel of the rectal tube is disconnected and the contents of the bowel is allowed to escape. Another portion is then allowed to flow into the bowel. The water will sometimes escape alongside of the tube. This is rather a favorable sign, being significant of the contractile powers of the gut and abdominal walls. Only two enemata daily are necessary, even in severe cases of acute gastro-enteritis. As the diarrhoea symptoms subside, we reduce the number of enemata to one."

In connection with the excellent plan outlined by Dr. Koplik, we give below reports of cases where the internal administration of Glyco-Thymoline and its use as a colon flush played a most important part.

Case presented by E. A. Chatfield, M. D.

Aggie McK., age 14 months, cutting four teeth, taken suddenly sick in the night with colicky pains, vomiting and purging pulse 140, temperature 104 degrees; the stools in a few hours becoming copious, musty odor, greenish in character; the treatment at that time was mustard paste to abdomen and mild purgative. The next day I prescribed standard drugs, but the bowel trouble did not abate; she kept on in the same manner, growing weaker and becoming rapidly emaciated. On the fourth day I commenced using Glyco-Thymoline with equal parts Liq. Bismuth, teaspoonful every two hours; it acted like a charm. After two doses could notice a change for the better and in three days the child was convalescent.

By H. Plympton, M. D.

I want to report a case to you which, in view of the approaching hot weather, I think a very important one.

A baby was born to a patient of mine on April 20, which was robust and well in every particular except for an ophthalmia.

The surroundings being such that the mother could not minister to it properly; it was taken to the Eye and Ear Hospital on Livingston Street, on the 26th.

On May 20th the mother was notified that the baby had been suffering with vomiting and diarrhoea for some time and would probably not live long. It had been unable to retain food for forty hours and was terribly emaciated when I saw it on the night of May 20th, and I did not expect it to live till morning.

I ordered a half teaspoonful of fifty per cent. solution Glyco-Thymoline to be given every hour. The child did not vomit after the first dose, the bowels moved less frequently, and at six o'clock the next morning it took three ounces of food and retained it.

Since then it has been gaining rapidly and is out of danger.

A remedy that will check a violent diarrhoea in such a natural manner is specially valuable in the summer months.

Case Reported by Millard Decker, M. D.

Frank H., aged eleven months, was seen by me June 10th. The child had been partially weaned. was feverish, restless and had colicky pains at intervals. The abdomen was somewhat distended with gas, the tongue coated, evacuations frequent and thin, containing particles of undigested food, sour and stinking. Temperature 100; pulse weak. Diagnosis—Diarrhoea, caused by indigestion. Treatment: Ordered castor oil and after bowels moved gave Bismuth subnitrate, four drachms; lacto-peptin, one drachm; tr. opii. camph., five drachms; creta prep., two drachms: aquae dist., three ounces, one teaspoonful every four hours, ordered the mother to stop nursing the child. June the 11th child was about the same. I now changed medicine by ordering Glymo-Thymoline in half dram doses every three hours and rectal irrigations of 25 percent. solution of same three times per day. June 13th, the child was much improved, temperature normal; pulse better; tongue clean. From now on the child steadily improved and made a good recovery.

By R. Graham Hereford, M. D.

A fifteen months old bottle-fed baby presenting the following:

Temperature 103 deg. F., bowels had been moving twelve to fifteen times during the twenty-four hours for two days. Stools greenish in color, streaked with blood and very offensive vomiting incessant.

Diagnosis: Cholera infantum. Treatment: 1-10 grain calomel and soda bicard every half hour until character of actions changed. Injected high into the bowel every six hours a solution composed of Glyco-Thymoline, two ounces to a pint of hot water.

Twenty-four hours later, temperature normal, child much brighter. Then ordered the following prescription:

℞ Liquor Bismuth, U. S. P.
Glyco-Thymoline aa ʒ i.
M Sig. Teaspoonful every three hours.
Child entirely well on fourth day.

Bronchiline.

The season of the year is approaching when a little, apparently innocent cough, by neglect, may last all winter. We call attention to the effective remedy furnished in Bronchiline. If you will try it you will find it splendid. The formula is published on the bottle. It is one of the best remedies that has come under our notice. Full particulars upon application. Peter-Neat-Richardson Company, Louisville, Ky.

The severe burns only come to the physician's attention. In such cases immediate relief and early resolution will be obtained by the application of Phenol Sodique. As an anodyne and local anaesthetic for burns the value of Phenol Sodique is inestimable.

The primary shock attending burns is taken care of by the hypodermic administration of morphine sulph. 1-4 grain combined with Atrophine Sulph. 1-60 grain. Afterwards an application of Phenol Sodique is only necessary. As a first treatment remove the loose tissue, apply compresses of undiluted Phenol Sodique and protect from the air. In after treatment apply Phenol Sodique diluted with 50 per cent. distilled water or 25 per cent. C. P. Glycerine.

The formation of pus and decomposition of loose or broken-down tissue is prevented by the application of Phenol Sodique. After first bandaging le

Resinol in Pruritus

RESINOL is the specific for all forms of pruritus. There is nothing that produces such immediate cessation from its pain, burning, and intolerable itching.

RESINOL SOAP

possesses the healing qualities of the Ointment, and is invaluable for cleansing affected parts.

I find by testing it that your Resinol Ointment is a most excellent preparation for all skin diseases; and for pruritus ani et vulvæ, I have never found anything better.—I. B. HARGETT, M. D., Cleveland, O.

I used your Resinol Ointment a short time ago in a most intractable case of pruritus ani which defied every other remedy used. It was relieved in a very few applications. I regard your preparation as a triumph over this detestable symptom.—J. G. KELLY, M. D, Hornellsville, New York.

I tried your Resinol Ointment on myself. I had suffered from pruritus ani, or marginal eczema, for 25 years, and had tried many remedies without any relief, until Resinol proved soothing and stopped the itching instantly.—J. T. HICKMAN, M. D., Mt. Jackson, Virginia.

Resinol Ointment is the first local application I have found, that has given lasting and gratifying results in the treatment of pruritus vulvæ.—DR. GRACE WINTERSTEEN, Harrisburg Pennsylvania.

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BALTIMORE, MD.

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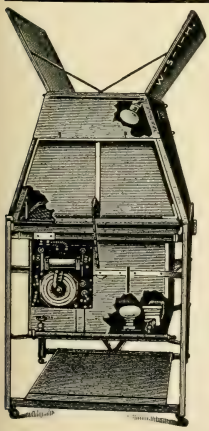

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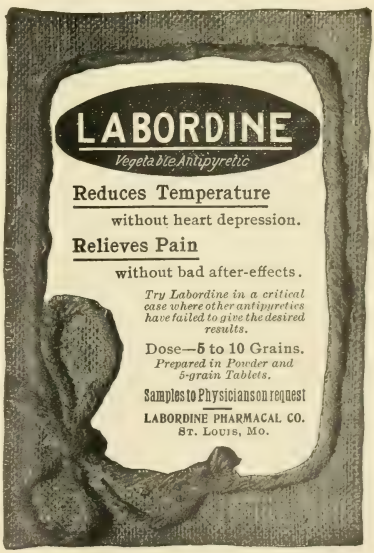

remain until healthy granulation has ensued; as thus the burned portion is protected from the air.

Phenol Sodique soaked through the already applied dressing in quantities sufficient to keep the dressing moist will give excellent results. The close relationship existing between the kidneys and cuticle should not be lost sight of. The skin when burned cannot eliminate the impurities so forces this additional labor upon the kidneys. This condition should be watched and kidney treatment, if any, judged accordingly.

A severe case of burns, caused by the explosion of a gasoline stove, recently come under the notice of the writer. The patient, a carpenter by trade, was severely burned about the face, neck and hands. Although intense suffering was caused by the burns an immediate application of undiluted Phenol Sodique relieved this pain in a very short while. After the first application of undiluted Phenol Sodique the affected parts were bandaged and kept moist with a solution of Phenol Sodique. To-day the face and neck are entirely well, without a scar remaining. The hand still has red splotches, which is due to the fact that from the first day after meeting with the accident the patient continued his daily work, which necessitating the constant use of his hands retarded their healing.

Phenol Sodique is the best, safest and most generally used antiseptic for cuts, burns, sores, catarrhal conditions, etc. The uses to which this antiseptic can be applied are very numerous and can be better understood from the published literature on these subjects.

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This valuable recipe is the result of the life long experience of a physician connected with the jail, who had under his care, almost daily, people addicted to the use of a strong drink. A test will prove its value. The formula is on each bottle. Manufactured by Peter-Neat-Richardson Co., Louisville, Ky.

Diseases of the Intestinal Canal in Children.

Diseases of the intestinal canal in children present at times the greatest difficulty in the way of diagnosis. The little patients as a rule are very diffident when it comes to disclosing their troubles, particularly to the physician. We always trace the origin of diseases of the intestinal canal to the want of alkalines to correct an excess of acidity during the digestive process.

In my estimation, we do not pay sufficient attention to the alkalines which facilitate the absorption of fats in the digestive process. Blood is always alkaline to a certain extent. It gives to the various secretions its peculiar properties. In increasing the alkalinity of the blood we naturally change the secretions which become more alkaline or neutral. We know that the presence of acids in the stomach is necessary to the digestive process, but those acids should be neutralized and this is what is done by the normal amount in the blood of alkalines which facilitate the combustion of the carbonated food absorbed during the digestive process.

Incomplete combustion of the food always results in decomposition which is invariably of a septic nature. Therefore, if we have an antiseptic which possesses the normal proportions of the alkalines in the blood and its proper degree of salinity, we may be satisfied that we have at our disposal the ideal preparation for the diseases of the intestinal canal. From actual experience in a large number of cases I may assert that Glyco-Thymoline is exactly what the practitioner requires. It has all the good points of a good antiseptic; alkaline and saline, is always of same uniform strength; furthermore it is very palatable, clean to handle and perfectly harmless, which is not the case with the great majority of antiseptics found in the market.

In a general way the first thing to do is to clean the whole intestinal tract with a mild laxative. In addition, I use Glyco-Thymoline internally and to flush the colon, the latter, a practice by the way, which is very much neglected. A solution one ounce of Glyco-Thymoline to the pint of hot water is satisfactory as a rule, the quantity to be governed by the condition. The flush should be repeated daily. Fifteen drop to teaspoonful doses in a little hot water repeated several times a day is sufficient for internal use. It is also very necessary to keep the mouth entirely free from decomposing matter. This can be done with a weak solution of Glyco-Thymoline which is very soothing and also very effective in allying the irritation of dentition.

Below I give some case histories:—Albert M., a child of mixed blood, two years old, had cholera infantum. Dentition was to be accounted for in this case. The milk of the mother was too rich and I had to resort to artificial feeding. Cow's milk mixed with its own volume of lime water, Glyco-Thymoline internally (25 per cent. solution) also flushing of the bowels. This case was particularly severe. The temperature reached 104 deg. F. and discharges from the bowels, vomiting, etc., profuse and the nervous symptoms quite intense. Sponging with Glyco-Thymoline (25 per cent. solution), kept the temperature down. The little patient recovered.

Case II.—F. C. S. Symptoms: Pulse, 145, feeble, filiform: temperature, 104.5 deg. The child had been sick ten days and there was considerable wasting of tissue; eyes sunken and signs of stupor. The stools (twenty-five or thirty during the last twenty-four hours) typical of cholera infantum. Previous treatment had been bismuth and opium, also calomel in broken doses which was discontinued. Instead I ordered Glyco-Thymoline, full strength, one teaspoonful every four hours; furthermore I irrigate the bowels with the same preparation (1 oz. to pint of water.) I give also a saline laxative. On account of the extreme weakness of the child I authorize a small quantity of brandy to be added to the ice water used to quench the intense thirst.

There is slight improvement the following day. The temperature is only 101.5 deg., the pulse is stronger. The stools are not so frequent. Vomiting, which was intense on the previous day, has subsided. Same treatment to which I add milk and lime water equal parts as nourishment, also barley water with a few drops of Glyco-Thymoline. To make a long story short, the fight lasted ten days with slight relapses, the main difficulty being to feed the patient who refused to swallow everything offered to him. It was necessary to resort on various occasions to predigested food, chicken broth, beef juice, etc., always taking care to add Glyco-Thymoline as an antiseptic in the food. To this precaution I attribute my success in the case. It goes without saying that this preparation was employed full strength only during the first few days of the treatment. On two occasions I resorted to minute doses of veratrine to control the temperature, ordering also a 25 per cent. solution of Glyco-Thymoline as a sponge bath.

I have had in charge since ten other cases of cholera infantum, but was not handicapped by previous medication. In all these cases I invariably relied upon Glyco-Thymoline and was not disappointed. It was freely used to irrigate the bowels and to render the digestive tract aseptic. In my estimation this is the solution of the whole problem. In fact there is no necessity to let the intestines get into a condition requiring the administration of bismuth or calomel. My experience with Glyco-Thymoline as an intestinal antiseptic has led me to this conclusion.

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Geo. E. Bahrenburg, M. D., Sawtelle, Calif., says:

I had a man come under my care with a bad carbuncle on his breast. In past experience the non-surgical treatment of carbuncles, has proven unsatisfactory to me, I was somewhat perplexed as to what course to pursue, when I struck upon the idea of using LIQUID CAMPHO-PHENIQUE I applied it full strength and was most agreeably surprised to find that after the second day, the sore had entirely disappeared, its progress arrested, and a clean, healthy wound remaining. I continued the same treatment, each day packing the large cavity with gauze, saturated with CAMPHO-PHENIQUE. After eight days I discharged the patient cured.

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PHENIQUE

In conclusion, I may quote a case of scarlet fever in which I used Glyco-Thymoline as a wash to facilitate the eruption. The patient was also a child seven years old. The recovery proved uneventful with classical treatment and proper nursing.—M. E. Chartier, M.D., Back Bay of Biloxi, Miss.

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One of the most difficult things that a physician encounters is a man who is addicted to drink. Charming fellows, as they generally are, and who are unable to resist the temptation. Antidipsole will tone up the system, remove the taste for liquor and enable any man, who is desirous of giving up the habit, to do so. Full particulars upon application. Peter-Neat-Richardson Co., Louisville, Kentucky.

Some Neglected Symptoms of Non-Surgical Gynecology.

It is but a lack of inquisitiveness on the part of the general practitioner that has brought about a condition of things in gynecological practice that warrants the assertion so often reiterated in current surgical literature that "Modern gynecology belongs, practically, to the field of operative surgery."

The successful physician, with a characteristic personality of inquisitiveness, can boldly refute such assertions and substantiate his refutation by the thankfulness of a happy clientele of womankind released from a thraldom of suffering by his inquisitiveness.

Diseases of the female organs of generation are more common than any but a physician can suppose, and surgical gynecology has become a necessity from an early neglect of backaches, spineaches and headaches, followed by irregular, scanty, painful, delayed or suppressed menstruation during girlhood. The inquisitive physician rushes not into instrumental interference, nor sends such patients to certain specialists for officious mutilation, bu first a volley of seek-farther questions at the patient which elicit the information that such patient passed her days of approaching puberty in an overcrowded public school, or, worse, in a jail-like boarding school for young ladies, adding fuel to the fire of antagonism between brain aud indigestible foods, the body growth lags behind, leaving the imprint of the unequal struggle on the reproductive organs.

With poorly established sexual functions and a perfect disregard for menstrual week, the undeveloped woman leaves school to plunge into a vortex of social dissipation, followed later by an assumption of wifely duties and responsibilities toward a husband who has seen only her bewitching face and not her frail body.

It is hard to fathom the reason why so many such wives at first tolerate marriage obligations and later resent and loath them when the poor, broken-down sexual system refuses longer to continue functions for which it was made, but carelessly unfitted?

Is not such a condition a cause for dread of maternity on the part of the woman which often leads to criminal abortion, with all its attendant sequences?

To the inquisitiveness of the successful physician must be added a power of positiveness, wherein he may teach both the husband and the wife something they should know before their carelessness brings about these later conditions which require the necessity of mutilation.

The woman suffering from continued nervousness, weariness, wakefulness, headache and backache needs the services of a physician, and not a surgeon. Likewise such symptoms as scanty, painful, delayed and suppressed menstruation should be under the care of a physician and not an over-zealous surgeon. Prolapsus, leucorrhea, ulcerations, chronic inflammations, congestions and enlargements are purely the outcome of neglect of

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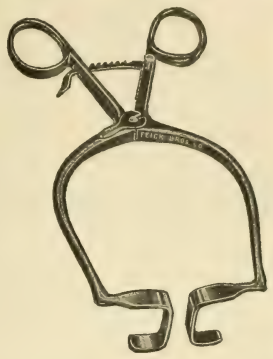

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just such symptoms as named. The first-named symptoms are but the assertions of Nature that she is tired of the unequal load, and if not relieved she will resist no longer, come what will.

A judicious investigation of seemingly insignificant details and close application to the technique of examination in the early stages of such cases will reveal constipation, congested mucus lining of the vagina, and irritable bladder, with diffuse hyperæmia of all pelvic structures and loss of organic or respiratory rythm; that subtle thrill which extends over the whole body synchronous with the beating of the heart and motion of the lungs, plainly perceptible to the trained eye looking upon healthy pelvic viscera. Quick must be the relief of this engorgement, with its pernicious nutrition of the parts and concomitant accumulation of excrementitious matter.

First and foremost in the treatment of this condition comes the remedy of absolute rest to the parts, and then, but no less important, is the removal of improper dress and the re-establishment of abdominal breathing to restore proper circulation in the pelvic viscera. Treatment for the removal of constipation is self-suggestive; rest we can enjoin upon our patient, and abdominal breathing we may advise, but all animal cells, whether single or united in tissues or in organs, consume a certain amount of m tter, and those chemical changes by which material brought to the tissues and organs by the blood and transformed into other products through the activity of the living cells which liberation of life energy, must be maintained by a continued inherent thrill or respiratory rythm and a constant supply of chemical products. This same chemical agent must not induct a destructive blood metamorphosis, but supply food for the debilitated vitality. For such action we must seek some combination of the old and well-tried remedies of ergot and apium, with acceptable haemagogues.

The questionable action heretofore exhibited by various preparations of such remedies has been due, as clinically proven, to the component resinous compounds of the apium in the combination. In Ergoapiol (Smith) the active principles of apium have been isolated and with ergot made to form an acceptable and agreeable compound with invigorating haemagogues, proving of unquestionable benefit in such conditions as mentioned in this article.

When the general practitioner awakens to his re-

The Charlotte Medical Journal.

Vol. XXVII. CHARLOTTE, N. C., OCTOBER, 1905. No. 4

Institutions for Mental Defectives.*

By Martin W. Barr, M. D., Chief Physician Pennsylvania Training School for Feeble-Minded Children, Elwyn.

Asylum protection for idiots dates back to the early eighteenth century, when to the good St. Vincent de Paul and his *Confrerie de Charite*, those esteemed as little more than human brutes came to be regarded as "*les enfants doe Bon Dieu.*" The actual training, however, of feeble minds—a training based upon physiologic and psychologic experimentation, and working towards a definite and practical end—is one of the many triumphs of the nineteenth century.

The educational experiment of Itard in 1800, with the wild boy of Aveyron, made to substantiate the views of certain thinkers of the day as to the immediate connection between sensations and ideas, failed to verify, because his subject proved not an untutored savage as he had supposed, absolutely undeveloped or biased by previous environment, but an untrainable idiot.

This, however, had been surmised by Bonaterre, Pinel, and other scientists watching with interest the experiment, but Dr. Seguin, closely associated with Itard, recognized also the possibilities for the idiot in a physiologic education, which Itard had demonstrated as completely for him, as had Pereire, and Valentine Hany for other defectives—the deaf mute, and the blind.

Building upon this theory, Seguin, in 1837, opened in Paris a private school avowedly for the training of idiots, in which he met with such success that he was a few years later called to take charge of a school opened for this class of unfortunates at Bicetre. By a singular coincidence, this was the very site of the asylum before alluded to, consecrated by the prayers and labors of St. Vincent de Paul and his confreres in a previous century.

That the efforts of these devoted men were not permitted to fall to the ground is seen in the success of this establishment which still exists in Paris, and furthermore, in an almost simultaneous movement in various countries toward this one aim, as if the world at large was being impelled by a common impulse to an effort to "comfort the feeble-minded;" so that before the middle of the century, Germany, Switzerland and America, under the leading of Saegert, Howe and Guggenbuhl had entered upon the training of mental defectives.

Saegert, in 1843, encountering many of these in his school for deaf mutes in Berlin had soon realized, as had Howe in his institution for the blind in Boston, 1839, the utter impossibility of co-education of two kinds of defect. Successful experiments in separated classes led both men into an expension of work resulting in separated establishments speedily influencing emulation in both countries.

In Switzerland the sympathies of Guggenbuhl enlisted in the cause of the cretins of the Alps, led in 1842 to the establishment of the Asylum of the Abendberg where methods of training attracted the attention of philanthropists, and interested observers from all lands.

England, inspired by its example, was soon in the field. The Misses White opened a private school in Bath in 1846, and before 1850 Drs. Twining and Conolly, Rev. Addrew Reed, and Mr. Gaskell had taken initiative steps, the results of which are to be seen to-day in the noble institutions of Starcross, Knowle, Essex Hall, Earlswood, and The Royal Albert, caring for over 1,000 children.

The Metropolitan Schools of Darenth opened later, 1875, provide for 1,000 of the pauper class of London, and various private schools respond to calls from the nobility and even from royalty itself.

In Germany, Kern closely following Saegert, in 1847, opened his school at Mockern, the forerunner of many, which show Germany to-day far surpassing her co-pioneers.

France, with the exception of the Asylum of La Force, near Bordeaux, founded by John Bost, 1846, has not builded upon her past. Her system of public instruction makes no provision for mental defectives; there is but little done in private schools, and the chief of these L'Institut Medico-Pedagogique at Vitry-sur-Seine under the direction of Bourneville, receives boys only.

Switzerland, although with nothing in the present century to compare with her Abendberg of the past, has yet 18 private asylums, some receiving state appropriations, and her chief cities have special classes for defectives with an attendance of some 600 children; but in 1902, she reported 5,485 mental defectives for whom there was no provision.

In America, Dr. Howe at the moment of reorganizing his work in South Boston was fortunate in securing the aid and counsel of Dr. Seguin himself, who, forced into exile

*Read before the School of Philanthropy, July 25, 1905.

by the stress of the revolution in France, brought to our shores the invaluable gift of his experience. South Boston, Columbus, Ohio, Syracuse, and the Pennsylvania Training School each in turn received this benefit before he finally settled in New York City, opening the medico-physiologic school which, removed some years later to Orange, New Jersey, is still continued by his widow. Meanwhile the influence of his work in Paris, of Saegert in Berlin, and of Guggenbuhl on the Abendberg was extending throughout the entire continent of Europe, and Holland, Russia, and Denmark early in the fifties, Sweden and Austria in the sixties, Norway in the seventies, and Belgium and Italy in the nineties had fallen into line; and within the same decade, Australia and Japan emulating this example completed at once the circle of the globe and of the century.

The United States presents at the opening of the twentieth century no less than 31 large institutions for the feeble-minded, of which 27 are state or municipal, three are private corporations deriving state aid, and one (Barre, Mass.) a distinctly private undertaking, while an ever-increasing number of private schools meets a demand from the wealthier classes.

Thus in 21 States, extending from ocean to ocean, provision is made for some 10,000 mental defectives.

Dr. Samuel G. Howe, Dr. Hervey B. Wilbur, and James B. Richards are justly regarded as the pioneers of the work in America. It, as we have seen, owes its inception, and also its incorporation into state charities, and the inspiration of Seguin's co-operation, to Dr. Howe of the Perkins Institute for the Blind in Boston. His experimental class removed to South Boston, 1850, but is still directed by him in connection with his other work, was there reorganized by Seguin and the school placed in charge of James B. Richards. Later, removed to its present site—Waverly—in the suburbs of Boston, it has maintained its position among the foremost charities of the state; celebrating its 50th anniversary by the inauguration of a colony for its trained workers, and embracing a tract of some 1600 acres, it affords opportunity for aid in self-support, and for permanent separation under happiest conditions for these children of the state hitherto a hopelessly dependent class.

Barre, the only private institution in the country, which provides for and has reached the hundred mark, was opened in 1848 by Dr. Hervey B. Wilbur. Hardly was it well established before Dr. Wilbur was called to inaugurate the work in New York, and to take charge of the experimental school at Albany, later removed to its present home in Syracuse. Here he tells of Dr. Seguin's coming, rendering invaluable service to him by his counsel and inspiring his assistants with enthusiasm. This school which numbers some 600 pupils receives neither untrainables nor epileptics.

The Pennsylvania Training School at Elwyn might justly claim to be a daughter of Bicetre in direct descent, its founder and first superintendent being James B. Richards, above alluded to, a pupil of Seguin, who was also himself for a brief period associated with him in its direction.

Beginning 1852 as a small private school at Germantown, numbering 17 children, it was later removed to its present location; adding farm to park-land, and house to house, it stands to-day the asylum village of Elwyn, where the little one has literally become a thousand, including pupils from the West Indies, Brazil, Austria, England and Japan; and has sent out a colony of trained workers, numbering some 150 children, to help in the building up of a new institution in the western part of the state.

The Ohio Institution near Columbus, coeval with Elwyn, has also reached the thousand mark. It aims, with the gift from the state of a thousand acres together with suitable buildings, to make this class of her dependants self-supporting, relieving the state of the burden.

Such a proposition even, indicates for the work a distinct parting of ways; an advance from the early conception of simply redeeming the individual from a condition of perpetual infancy and rendering him happy in childish sports and occupations, and therefore, less of a burden. Developing on true educational lines, passing from simple to complex, yet holding fast to the idea originally embodied in Seguin's theory and practice that "the working hand makes strong the working brain," the institutions have, from time to time, added to their occupations manual or simply industrial, as the character and grade of their inmates indicated as needful or as best suited to development. For those of low-grade, knitting, netting, weaving, darning, mat making, or occupations of house, nursery, farm or garden. Those of middle grade are enabled to enter the various trades; many of the aids to bakers, shoemakers, tailors, carpenters, and painters are drawn from this class: while the more intelligent—high grade or backward children—become printers, dressmakers, cabinet-makers, stenographers, musicians, and sometimes even teachers or trusted attendants; but always under some supervision.

As may readily be seen, with such a body of trained employees, working under dir-

ection, and with a modicum of wage to give a sense of independence and insure happiness and content, an institution unburdened by epileptics and untrainables might become largely if not altogether self-supporting, if it could be assured of a permanent force. But here is just the weak point—the difficulty that besets and hinders the work.

The institutions do not suffer for lack of advertising. Each one has doubtless hundreds on its waiting list, and the public mind is already beginning to be educated as to the fallacy of cure. But it does not yet lay hold of the peculiar weakness and irresponsibility of the mental defective, which precludes continuous effort except under direction and in an environment suited to his peculiar needs, rendering the class, therefore, unfit to compete with normal labor; nor can it understand or believe that where one might succeed, ninety will go to the wall. Hardly has the child passed the school period and entered upon that apprenticeship for which the school only prepares him, when parents or guardians, fancying that he can earn wage or assist in the house, withdraw him. It has been more than labor lost in every sense, for not only does the individual, the family and the institution not gain, but society does gain an enemy all the more dangerous since mental defect has been concealed and disguised.

To society he comes as the ordinary young man—a trifle eccentric—a little below or, perhaps, beyond the ordinary.

But we know him as always imbecillus—needing a staff—and that that he will ever be, competent workman, trained musician, artist, or artisan though he be; and we know moreover that sooner or later, to the third or fourth generation, imbecility will transmit imbecility. This is the great problem checking advance, that faces both society and the institutions, and a growing concensus becomes evident as to the necessity of an appeal for legislative aid and protection.

The institution of Michigan presents it thus: "It is urged that a law be passed whereby persons committed to this institution can be held under more specific terms than at present, and so removing the danger of irresponsible relatives taking from it individuals presumed to be fit to go out."

Both New Jersey and Missouri have lately passed laws virtually amounting to permanent detention, and Pennsylvania, in two successive acts, has sanctioned the invoking of surgical aid to prevent the increase of defectives; yet a measure so pregnant with good for society has been twice lost through the ignorance and timidity of of two Governors.

Here and there one finds in print allusions which show the gathering force of public opinion. Such as these for instance:

"We must try to make the thoughtless question their right to bring children into the world under conditions which are detrimental to child-life; or for society to care for, however troublesome or deficient such ill-born children may be." And again:

"If we may not, as did ancient peoples, let nature destroy such failures, we might at least secure her aid in lessening the numbers of such human failures."

A woman's society for political study favors "race suicide" thus: "In lieu of wasting sympathy on people who surround themselves with large numbers of little ones whom they cannot possibly feed, let the parents starve if they insist upon bringing paupers into the world, or better still, let us have anti-pauperism laws that shall restrict such propagation of the human species."

That these signs of the times are not the off-spring of fadism, fanaticism. nor a mere ebullition of over-wrought feeling, but the natural result of experience, is proven by statistics. Not only have the institutions increased in numbers and broadened their work, but they have been forced to multiply their accommodations and increase their equipment to meet the appalling increase of imbecility generated by a highly nervous age in divers forms, of which the backward child and the moral imbecile are the extreme types.

Special classes for backward, and juvenile courts for delinquent children, have now place in all our large cities, and from these a perpetual stream of all sorts and conditions of degenerates press for admission to the institutions.

To the original asylum therefore, with mere improvement classes has been added a department training in the manual and industrial arts and to these, yet further, custodial buildings for those whose liberty must in a measure be curtailed. Epilepsy, and the effort to force into the training schools the hopeless idiot, and the equally untrainable adult are difficulties ever present, which the withdrawal of trained imbeciles, who might aid in the care of these in asylum, but intensifies. Indeed, the very presence of these asylums for incapables within the training schools creates a misapprehension in the minds of the public as to the true nature and possibilities of training. A case once entered, nothing can convince the friends that it cannot improve. He is in a training school—why is he not trained (?) is the very natural query. Only when the asylums are removed from the immediate precincts of the training school, although retained under its administration,

may these complainants be brought to understand that he who enters these leaves hope benind.

Some institutions refuse to receive either idiots or epileptics; others such as Rome, N. Y. and the Craig Colony, and Bielefeld, Germany, have been organized for their special benefit, and do in a measure relieve the pressure upon others. Some of the German institutions notably Mariaberg, Alsterdorfer, and St. Nicholas Stift, have broadened out on the colony plan with asylums for epileptics and incapables, training schools for abnormal, and orphanages for normal children, distinctly separated.

In this brief review I have tried to make clear that while the work of institutions approaches a climax in both theory and practice, it is being seriously hampered by pressure from without and by complications within. When we consider that the institutions for defectives are doing their best to respond to the demands of society, and of the state, it is but just that they should receive that protection which will insure stability and progress, which legalized asexualization and segregation alone can give.

A Case of Radical Mastoidectomy Performed Under Unusual Indications.*

By John R. Winslow, B.A., M.D., Clinical Professor of Nose and Throat Diseases in the University of Maryland; Laryngologist to the University Hospital.

Mr. C. H., white, farmer, aged 32 years, was first brought to me by his family physician, Dr. C. R. Winterson, April 15, 1904, with the following history:

The patient had been under the treatment of several physicians during three or four years for catarrh of the throat and purulent discharge from the right ear, which latter had, however, ceased for a year past. He was subject to frequent colds, and his voice was husky most of the time. Nervous temperament, general health, good; no syphilitic taint. A brother and sister had tuberculosis; parents living and healthy.

For about eighteen months previous to my examination the patient had been subject to "nervous attacks," occurring at first perhaps once a month, then once in two weeks, then weekly.

The attacks at first seemed purely hysterical, as evidenced by alternate laughing and crying, and sensations of general numbness; in fact, they resembled the antics of a drunken man so closely that the family physician made a careful investigation before excluding this possibility.

As they increased in frequency they also became severer, and mental confusion appeared. The patient would lose himself in his own house, would not know what room he was in, nor what he was doing.

Two weeks prior to my examination his physician had noticed pain on pressure upon the mastoid, also neuralgic pain over the right eye.

Examination showed deviated nasal septum to the left and general catarrh of nose, pharynx and larynx. There was no pus in the nose.

Left Ear—Drum dull and retracted; marked posterior fold: drum movable; Eustachian tube patent; whispered voice two and one-half feet.

Right Ear—Drum destroyed; ossicular remains bound down in cicatrix; slight gummy exudate in bottom of ear; no pus; nerve deafness.

Pressure over right mastoid antrum caused local pain and also supraorbital neuralgia over right eye.

Owing to the highly neurotic type of the patient and of the symptoms, and a suggestion of periodicity, I advised keeping the ear clean and a trial of anti-malarial and nervine medication, at the same time suggesting the probability of mastoiditis as the underlying cause.

On September 27, nearly five and one-half months later, the patient and his physician again appeared, with the additional history that five weeks previously the patient had had an attack which took the form of a muscular spasm, lasting about eight hours. He did not lose consciousness at this time.

Three weeks later (two weeks preceding the visit) the patient was seized with muscular spasm ("cramps"), and in two hours lapsed into unconsciousness, in which state he remained about twenty-four hours. The respiratory muscles took part in the spasm, and it required the combined efforts of two physicians, practicing artificial respiration, to keep him alive.

The doctor assured me that in his belief the patient could not survive a similar attack, and urged upon both of us the absolute necessity of doing something to prevent its recurrence.

Each of these attacks had followed a "cold" (infection). A most minute examination revealed an improvement, if any change, in the aural condition. The right ear was absolutely *dry*, and there was *no tenderness* on pressure over the right mastoid antrum.

The possibility of some disease of the central nervous system suggested itself to me, and a prominent neurologist was consulted, with no elucidation of the condition.

*Read before the Section on Ophthalmology and Otology of the Medical and Chirurgical Faculty of Maryland, May 26, 1905.

The patient was placed in the University Hospital for further investigation.

During a period of nine days the *temperature* was mostly normal, and on four mornings was subnormal (two 98 deg. and two 97 deg.). A general physical examination revealed a normal condition of all the organs. Ophthalmoscopy showed a normal eye-ground; there was no nystagmus. The ocular movements were normal. also the pupillary reaction.

In short, there was absolutely nothing in the whole body to account for the condition, except a non-suppurating and apparently cicatrized ear.

Two conditions suggested themselves as a possible cause—latent chronic brain abscess, and irritation or inflammation of the labyrinth.

Of the former, the only indication was an occasional drop of the temperature below normal. No headache, nausea, vomiting, nor chilly sensations were present. Fundus oculi normal. The long duration of the symptoms rendered it improbable.

As to the latter, the patient had spoken of occasional dizzy feelings; he had no outspoken vertigo, and could walk a crack, with eyes open or shut, as well as anyone; sudden movements of the head to the diseased side caused no giddy feelings: there was no facial paralysis; tinnitus was not prominent; nerve deafness was present.

With a frank admission of my ignorance of the exact condition, operation was offered and accepted as a means of diagnosis, This I undertook October 3, 1904, with the determination to open up the semi-circular canals or invade the brain, as indications might lead me. The Korner radical exenteration was selected.

The mastoid cortex was not abnormally dense; the cellular tissue exhibited a universal intense, venous engorgement (purple color). It was slightly softened, but no granulations were found anywhere except a few in the mastoid antrum. No pus and no cholesteatoma was present. The remnant of the malleus and the incus was removed and the tympanum curetted. The horizontal semi-circular canal was exposed, but exhibited no fistula nor other indication for interference.

Considering the venous engorgement a reasonable explanation of the cerebral and labyrihthine irritation, I deemed it unwise to expose the sigmoid sinus or the dura mater.

Knowing that the wound would have to be cared for by the family doctor, who was unfamiliar with aural manipulation, I did not close it, as I should have preferred, so that healing was considerably prolonged. Otherwise recovery was uneventful. The patient was discharged from the hospital in seventeen days (October 20), his temperature never having exceeded 100 degrees.

April 4, 1905, the doctor reported the wound entirely healed, the meatus free from discharge, and that the patient *had had no return* of the "nervous attacks" (six months).

We well know that venous stasis and coaccumulation will cause irritation of the respiratory, convulsive and other nervous centers; also that inflammation of the environs of the fenestra ovalis and rotunda, attended by simple *trritation* of the labyrinth, causes similar symptoms to actual disease of this organ. Numerous cases are recorded of relief of such symptoms by ossiculectomy, alone and associated with the radical mastoid operation, or in diseased conditions of the labyrinth by partial or total operative (destruction of this organ.

In conclusion I venture to predict that in the near future the operative invasion of the petrous bone and of the labyrinth for *diagnostic* and curative purposes will be made with the same justifiability and success in *non-suppurative* conditions of these regions as is now done for the detection and cure of suppuration and its complications.

Resection of Bone.

By H. M. Wilder, M. D., Charlotte, N. C. Railway Surgeon.

Gentlemen:—Permit me the honor of bringing to your attention two cases of resection of bone, and help me to decipher the causes of success in the one and failure in the other.

Case I.—Van Jones, a mulatto, aged 18 years; at the time of his accident was a convict, serving time upon the county roads of Mecklenburg County, North Carolina. On the 29th of March, 1891, got the chain that was fastened to the cuffs around his ankles caught by the set screw of the shaft of a revolving rock screen, which drew him closer and closer, until his body was revolved around the screen and his legs were fractured against the timbers below. Both legs were fractured midway between the knee and ankle joints, the left leg being the worst of the two. He sustained a compound comminuted fracture of both legs. The left limb was so mangled that fully three inches of the fibula and tibia were splintered and powdered up so that it was deemed necessary to remove the bones with the forceps. The bones were brought together after irrigating the wounds, and as much as possible of foreign matter, such as dirt and other detritus, which had become intermingled with the lacerated flesh and broken bones, being removed. The ends of

the tibia were bored with an archimedean drill and fastened together by means of silversmith's wire. The ends of the fibula of the bones were not fastened together, as they were so small and movable. They were only approximated. The right limb suffered less in degree of injury. This was also a compound comminuted oblique fracture; the upper end of the fracture sticking through an opening in the skin and muscles; the lower end also protruding through an opening in the skin. The wounds of both limbs were thoroughly filled with dirt and gravel and fibre from the old bagging cloth upon which the patient had been borne in the taking him from the place of injury to the County Home. The splinters and fragments of bone of the right limb were also removed, and both ends of the bone, upper and lower, sawn off, and the bones were pushed past each other, so that a shortening of at least three inches of this limb was effected, and the limbs were compared and were made to correspond in length with each other. The ends of the tibia of the right limb were also fastened together by means of the drill and silversmith's wire. The wounds of both legs were thoroughly irrigated and, as near as possible, antiseptically dressed. Sand bags were placed on each side of both legs to act as splints and to render the limbs immobile. The wound of the left leg became infected in consequence of the surrounding conditions, and, for three weeks, pus and provissional callus vied with each other in issuing from the wound. Finally, after repeated irrigations, with variously impregnated antiseptics, the discharge began to diminish. The wires were removed and the patient began to convalesce between the third and fourth weeks. Several times succeeding the secondary period of the older writers (the inflammatory period, or the period that might be termed the most propitious for infection), it looked like amputation would be the only route to recovery, but irrigation and drainage, as I have already stated, were tenaciously persisted in until the wound gave clearly indicated signs of a healthy condition setting in. After about six weeks, the man began to sit up in bed. In two months he could sit upon a chair, and at the end of three months he was able to be removed to his home, three miles distant from the County Home, and, from three months until eight months, he made some locomotion by means of crutches. After eight months had elapsed, he was enabled to resume work, which he has continued to do in a manual way, some times of the most strenuous character, such as climbing telephone poles, and is, at present, employed at one of our largest cotton mills, firing boilers. He, together with another assistant, do the cores in the way of firing four boilers in battery, capacity 250 horse power each. I am reliably informed that he handles four tons of coal to his part per day, rolling same in a wheelbarrow thirty or forty yards distant, besides doing much of the stoking for the furnaces. He has been known to role a wheelbarrow, containing 812 pounds of coal at one time, since his recovery. Although the architecture and symmetry of his limbs have been considerably disfigured, he has succeeded in obtaining useful results, as you can readily foresee. The patient is to-day three inches shorter than before the accident. His former height being 5.10½ inches, present height 5.7½ inches.

Case II.—William Parks, aged twenty; happened to the accident of being shot with a shot gun, by a brother, at close range, resulting in a fracture of the humerus, carrying away two and a half inches of the bone in the middle third, leaving a very ragged wound. The wound was a compound fractured one, of course. After a thorough examination of the conditions surrounding the wound, it was ascertained that the circulation was still intact, and conservative treatment was resolved upon. Both ends of the humerus were sawn directly across, by means of a chain saw. The ends of the bones were then wired together and wound antiseptically dressed. Light board splints were applied until all tumescence, inflammation, etc., resulting from the injury subsided. Succeeding this, starch bandages were applied, which acted admirably in keeping the bones in apposition. Patient had no ill results after the surgical fever subsided, until between the fourth and fifth week. The limb began to swell and give pain. The wound was opened and examined and it was found that both ends of the bone had exfoliated and were detached from the shaft above and below. Two rings of the smoothly sawn bone were thrown off, not unlike napkin rings in appearance. Amputation was resorted to and, an uneventful recovery followed.

Now comes the lesson that these two cases appear to teach; and that is that broken bones will knit and unite while smoothly sawn surfaces will not. The reason that the sawn surfaces in second case did not unite was because the haversian canals were occluded, mechanically, from the effects of sawing, rendering it impossible for the pouring out of provisional callus. In the first case, the Haversian canals were open, by means of the broken surfaces.

The Medical Journal Trust and the Independent Medical Press.*

By F. E. Daniel, M. D., Austin, Texas.

Gentlemen of the Association of American Medical Editors:

The organization of the medical profession of America upon a plan that would secure unity and cohesion has long been recognized as a necessity in order to enable them to exert influence and secure medical and sanitary legislation in the interest of the public health. To this end various schemes have been tried in the several States, all, or most of which, have proved a failure. The medical press of the country with one accord has co-operated in the efforts to secure from Congress and from the several State Legislatures laws for the enforcement of preventive measures against disease—to protect the public from quacks—to provide for pure food, drugs, drinks, etc., but every effort has been a failure. The medical profession has not been able to impress Congress and the State Legislatures with the necessity for such legislation, and everything that has been asked for has been refused, and—in Texas—laughed at. In Texas it is a felony to procure anatomical material for teaching anatomy in our great school—hence grave robbing, for the material, must be forthcoming. The State Medical Association of Texas, at the request of the faculty of the Medical Department of the State University, asked the Legislature to legalize dissection and to give to the college the unclaimed cadavers from our charity institutions. The request was ridiculed and laughed out of court. The request of the American Medical Association that a physician be put upon the Panama Canal Commission was refused, as has been the request for a pure food bill and for a National Board of Health.

It was thought that when organized from the ground up the profession, speaking as one man, could command attention. We are now organized—and still we cannot do anything.

Organization for a legitimate purpose is most desirable, but when it is used for selfish, pecuniary or political purposes it is a power for evil, and is detrimental to the best interests of the profession.

When the plan of organization now in operation in nearly all the States was proposed, it was hailed with loud acclaim and rejoicing, and the medical press "whooped 'em up" with a vim. The journals and individual physicians co operated with the Journal of the American Medical Association's paid organizer, and in nearly every State organization has been effected, and never a suspicion had we of the ulterior and nefarious object to be accomplished by the originators of the scheme—The Journal of the American Medical Association. But in the light of developments the independent medical press can now see that they have cut the ground from under their feet, tied their hands, and been hoisted on their own petard. Why should the Journal of the American Medical Association pay large sums of money to secure the organization of State Medical Associations? In light of developments it is clearly seen that it was an investment, which is already paying large returns. After whipping into the county societies every man who could be coaxed or driven into the organization, and through the county society into the State Association, and through the State Association into the American Medical Association—where he becomes a member by virtue of his membership of his State Association, he pays $5 and gets the great organ of the National Association, a weekly. It is to be put into the hands of practically every doctor in every State. It is sent him free, as a bonus for his membership—hence every new member means $5 added to the coffer (already overflowing) of the great Journal A. M. A. There is the bug.

But that is not all. To facilitate this process, every State Association is induced to establish its own journal—ostensibly to publish the proceedings of the Association, but practically for political purposes, and they become whippers in and drummers for the Journal A. M. A.; feeders to the rapacious maw of the central power—the Octopus at Chicago. Thus a great medical journal trust has been organized.

These State Association journals are sent free to every member in consideration of his annual dues—(in Texas $2)—and every member of every county society in every State is expected to pay the fee, or the councillors will make it hot for him. The means of applying the pressure consists of giving it out that every reputable physician is a member of his county society; if not, the people will want to know why, and he is to be boycotted by them and by corporations, insurance companies, etc., and by threats of publishing a list of "who's who,"—so that it is made to appear that not to be in "who's who," and not inside of the corral, is to be "not in good standing." Already, in Texas, the Secretary of the State Medical Association (who edits the State Association Journal) publishes the statement that about 50 per cent. of the "regular" physicians are enrolled and this, he says, is 80 to 90 per cent. of the progressive

* Read before the Portland Meeting of Medical Editors.

and educated physicians of the State. The inference is clear. Those not "in it" are not "progressive and educated."

Such methods are reprehensible and smack of trades unionism.

Thus it will be seen that every physician in every State who is entitled to membership is to be driven into the fold *nolens volens*—or take the consequences; and thus it will be seen that every physician in every county in every State is to be furnished free of charge (in consideration of membership fee) the big weekly and his State monthly.

Where, then, come in the personally owned and independent medical journals? Where will their readers come from? The great medical trust thus established furnishes your readers with all they need in the way of journal literature and society matters—and the independent journals having been made a means to this end, stepping stones to the summit of power which is to be further used for oppression, coercion and profit, are kicked out and ignored—their past services forgotten.

Nor is this all. The Journal A. M. A., and the State journals, so-called—using membership money for the publication of the periodicals—take such advertisements as are carried by the independent journals at less rates than these publications can afford to carry them, and thus you, gentlemen of the independent press find your occupation gone, your revenues cut off and diverted into the coffers of the organization you have been mainly instrumental in creating.

What are you going to do about it?

The scheme, practically successful even now, through the influence of the independent press, is a menace to the very existence of an independent medical press. It is not to the interest of the organizers of the scheme that an independent press should exist. They dare criticise the great "I AM," and must be suppressed. The policy inaugurated and carried out by that journal is biased by the personal likes and dislikes of the management. In collating the current medical literature each week the managing editor never finds anything worth mentioning in the jouruals that have dared to raise their voices against it. Ask Register, ask Lanphear, ask the New York Medical Journal. This policy I am sure does not reflect the views of the great majority of the American physicians, of whom about 85 per cent. have not been corralled, nor of the 15 per cent. who are members of the A. M. A. In support of this assertion I submit the following:—

"The American Congress on Tuberculosis was the first body organized to fight tuberculosis. It was organized in 1900, and held its fourth annual session in St. Louis in October, 1904, under the auspices and upon the invitation of the World's Fair management, and the patronage and authority of the Federal government. Secretary of State Hay invited delegates to be sent from all foreign countries. The meeting was successful, largely attended, and gave the first impetus to the movement now so general, enlisting influence that will be effective in limiting the spread of consumption. It was participated in by many of the most distinguished physicians from Canada and Nova Scotia, Mexico, Central America, South America, Cuba and Porto Rico and of the South and West; Illinois, the home of the Octopus, being largely represented by prominent members of the A. M. A. and readers of the great Octopus. Dr. Simmons, ye editor, devoted an inch of the valuable space at his disposal to a sneer at the 'so-called Congress on Tuberculosis.' Common decency, or, at least, a decent regard for his readers, many of whom are members of the congress, working earnestly in the cause of humanity and the public health, demanded the support and approval of the great so-called 'representative organ' of the great A. M. A., and the neglect of it was so clearly the result of personal bias and prejudice towards the organizers of the Congress (the Medico Legal Society) on the part of ye narrow editor as to excite disgust."

This subject, gentlemen, in my deliberate judgment, demands your serious consideration. I have no remedy to suggest, unless it be a change of management, editorial and business, of the Journal of the American Medical Association. It is for you in your organized capacity to make your voices heard, and your influence felt for a change of policy which is so arbitrary and unjust and so ruinous to your influence and interests.

Surgery of the Kidney.*

By Chas. M. Rees, M. D., Charleston, S. C., Professor Gynecology and Obstetrics, Charleston Medical School; Gynecologist and Obstitrician City Hospital (Charleston, S. C.); Gynecologist to the Shirras Dispensary, Charleston.

It is probably true that as early as 1670 Zambeccarius and two years later Roonhuysen had proved by experiments on animals under the best circumstances one kidney could perform the function of elimination after its fellow had been removed. Before February, 1880, (the date of the first Nephro Liphotomy) besides G. Sinon's incomplete work, not more than a score of articles on renal surgery had been written—

* Read before the recent meeting of the South Carolina Medical Association.

these chiefly on nephrectomy. In 1879 Tait removed a pyosalpinx for the first time, as well as doing his first cholecystotomy. His first operation for primary ruptured tubal pregnancy was done at about the same time. At this time Kimball, Dunlop, Peaslee, Thomas, Thornton and Spencer Wells were doing a large amount of work in operating for such large ovarian cysts, as are rarely seen at present. In the course of fifteen years thousands of abdominal sections had been made.

It was probably the work of these abdominal surgeons that led up to the development and progress of the surgery of the kidneys and ureters. A most complete and interesting account of the history and progress of the surgery of the kidneys and the ureters is given by Dr. J. Wesley Bovee in his address as President of the Southern Surgical and Gynecological Association, 1905. With the advent of antisepsis and aseptis in 1880, and from that time forward the surgery of the kidneys and ureters has rapidly developed. Investigators became chiefly engaged in the study of surgical technique, with the idea of the prevention of septic invasion. Czerny, by doing a resection of the kidney for an Angio sarcoma, following an injury in 1887, materially advanced the conservative surgery of these structures. In 1881 Hahn was doing nephrorrhaphy for movable kidney, an operation which now has been done thousands of times. In 1888 Bozeman, of New York, succeeded in catheterizing a ureter through a vesico-vaginal fistula, and flushing out a pyonephrotic kidney. Grunfelds speculum and mode of catheterization, it has been suggested, was the origin of Dr. Kelly's method and instruments, and Pawlick has made objections to Kelly's claim of originality. Dr. Bovee, of Washington, has made valuable contributions to the surgery of the kidneys, and to conservative surgery of the ureters. Dr. Dougal Bissell, of New York, has devised and successfully performed a most ingenious operation for transplanting the ureters in the bladder wall. However, as the scope of this paper does not admit of a discussion of the surgery of the ureters, and was designed to deal with the conservative surgery of the kidney, I trust you will pardon my wandering.

In 1880, Henry Morris planned and successfully performed nephrotomy for renal calculus, since which time the operation has been found to have a wide field of usefulness, in other lesions of the kiduey. But until the last quarter of a century nephrotomy was performed only for the evacuation of pus. At the present time nephrotomy is performed in several different classes of cases. As an exploratory operation when the kidney is neither suppurating nor sacculated, nor distended. When the kidney is in a state of sacculation or suppuration or both. When there is distention or pyelitis. In cases of enlargement of the kidney, in some other way than by nephrectasis, to give exit to urine and allow of search for a culculus in obstructive anuria. The simple division of the capsule, with or without the removal of a portion of the cortex of the kidney, for the relief of great renal pain due to mechanical congestion, inflammatory hyperaemia, or subcapula extravasation of blood. Nephrotomy is a safe operation with a mortality much lower than nephrectomy. When a kidney has been destroyed beyond functional activity nephrectomy is the only operation, except in those cases where the kidney is sacculated and distended with pus, having extensive and strong adhesions, the separation of which would necessitate an opening into the general peritoneal cavity. Here the preferable operation is a lumbar incision and evacuation of the pus, followed by the suturing of the shell of the kidney, to the margins of the lumbar incisions, and drainage of the cavity. In properly selected cases following nephrectomy the functional activity of the remaining kidney will be markedly increased, assuming the double duty which it is called upon to perform with sstisfaction and comfort. Examples of this I have had under observation for several years. It is not, however, true, that when a kidney, with a portion remaining, which is still partially performing its excretory functions, or in one which is temporarily impaired by an acute inflammation or an obstruction of a stone in its substance, in the pelvis of the kidney or its ureter. If such a kidney is removed the remaining kidney will usually not assume the work of the two, as in cases where its fellow has been entirely destroyed and its remains removed. But it will soon become insufficient, diseased, and will perish. Again, it is not possible to determine to what extent the kidney which is to remain is already diseased. A kidney and a half, or a quarter, is better than one kidney. Except in very fleshy subjects the kidney is easily reached through a lumbar incision, and with care and safety its entire surface can be examined. In cases with peri-nephritic inflammation and a fibrous capsule thickened and densely adherent this capsule should be divided from one end of the kidney to the other to relieve the tension and the capsule peeled away from the parenchyma of the kidney, and all the thickened portion cut away. Free incisions into the kidney substance for an examination of its interior down to the pelvis can be made with al-

most equal safety. Search for a stone in the kidney or its pelvis can be thoroughly made. From such an incision cavities in the kidney can be safely drained, diseased portions and cicatrices removed. Conservative surgery has here one of its widest fields of usefulness. Hemorrhage from an incision into the kidney may at first be alarming, but it will soon stop, or can be easily controlled either by packing and drainage or sutures, and healing is rapid. Nephrotomy is not attended generally by shock, and the results are almost universally gratifying. Due to the uncertainty of the diagnosis of stone in the kidney nephrotomy has not impressed surgeons with the same confidence in the operation which belongs to operations upon the gall-bladder. The X-ray has proved a valuable aid to diagnosis of stone in the kidney, however repeated failures to discover the stone by X-ray examination does not in all cases contraindicate an exploratory nephrotomy. An operation upon the kidney, in which it is expected to find a stone should not be considered a failure, when the symptoms cover those which belong to a stone, if a stone is not found. If the changes in the kidney are sufficient to give symptoms simulating those of the stone. Capsule splitting and a section of the kidney will doubtless relieve many cases, the symptoms of which closely resemble those of a stone, but because of the uncertainty of a diagnosis are not subjected to an exploratory operation. Pain of stone may be simulated by any gross pathologic lesion of the kidney or ureter, such as tuberculosis, a tumor, hydronephrosis, etc. While ordinarily renal colic is associated with intra-renal retention from obstructed outflow. In certain chronic affections of the kidney with acute exacerbations the distention of a resisting capsule from within may be and often does give rise to a typical renal colic.

I will not here give in detail the symptoms which are present in stone in the kidney, nor of other lesions of the kidney with symptoms which simulate those of stone. Reference can be made to the volumes on Surgical Diseates of the Kidneys and Ureters by Henry Morris, where a most complete account is given.

Reference to the clinical record of a case with stone in the pelvis of the kidney causing obstructive anuria and great renal distention, which came under my care for treatment will serve to illustrate.

A white woman, visiting our city from Washington, D. C.; I was called to attend her in a severe attack of lumbago, which was a recurrence of several previous and similar attacks. The patient showed evidence of intense suffering, with the surface of the body moist and cold. Temperature elevated to 102 degrees, with a weak and rapid pulse. Pain was referred to the back and right loin, passing forward into the groin. Palpation of the right side was impossible on account of extreme tenderness. This condition continued more or less for three days, when her symptoms subsided. A specimen of urine was obtained, and examination of this found it to be acid, with a trace of albumen, and rather high specific gravity. Microscopical examination found some kidney epithelium, a few blood corpuscles, pus cells in abundance, After the pain subsided a large and tender kidney could be palpated. I gave her an opinion of stone in the kidney and advised operation. This was refused, but only two more attacks similar to the one in which I first saw her were required to gain her consent to operation.

Operation was made by the lumbar incision, the fatty capsule was firm and indurated with strong adhesion to the surface of the kidney. These caused some difficulty and delay in separation. The kidney was approximately twice as large as normal. The surfaces were smooth, except along the convex border, which was irregular with nodular masses of cicatrix. The whole kidney was extremely tense. A tumor consisting of the upper dilated portion of the ureter and pelvis of the kidney in size about that of a hen's egg, was found filled with fluid. Protecting the surroundings with gauze, this tumor was aspirated, the fluid from which was urine and drawn off. A free incision was then made into the dilated ureter, and an irregular stone about the size of the end of the trunk was removed. A quantity of semi-solid material, which had not consolidated into a stone was also removed. A sound was then passed from the kidney end through the ureter down to the bladder to determine any further obstruction which might exist. None was found. This cavity was then thoroughly irrigated, and the ureter washed out from the upper end down to the bladder. The incision in the ureter was then closed with catgut suture. Returning to the kidney, the fibrous capsule was incised and split from one end of the kidney to the other, along the convex border. The fibrous capsule was enormously thickened, and firmly adherent to the surface of the kidney. It was with some difficulty peeled away from the kidney, leaving the kidney bare of capsule for about three-fourths of its surface on either side of the convex border, and from end to end. All the reflected portion of the capsule was then trimmed away with scissors. A free incision was made into the kidney to one side of the convex border, aud deep into its sub-

stance, through what appeared to be healthy tissue. The interior of the kidney was thoroughly explored with the finger. A similar incision was made on the opposite side, extending from one end to the other, thus removing a large wedge of kidney substance, which appeared to include all the diseased portion. Bleeding was rather free, but was readily controlled by sutures, which approximated the cut surfaces of the kidney. A gauze packing and drain were placed on the surface of the kidney, brought out at the lower end of the wound. The incision through the muscles was closed throughout over the kidney. The urine was bloody for a few days, but rapidly increased in quantity. The case made a rapid and very satisfactory recovery.

The Machine Made Diagnosis and Its Dangers.—A Case in Point.

By W. E. Jinkins, M.D., Second Assistant Physician State Insane Hospital, Jackson, Miss.

It is said that the blessings of God are many, and that among His greatest is placing at the disposal of human mind and hand the means of relieving pain and disease. It is claimed by the management of modern hospitals, especially the private ones, that with their equipment, trained nurses and expert medical men, the sufferer is not left to uncertain and inexperienced services as in the private house and home, but that comforts galore and science par excellence are at beck and call. It is here that the patient may have his temperature thermometized and charted, valves phonendoscoped, chest stethoscoped, rales located and nomenclatured, the ruddy drops that visit a tired heart haemoglobenometered and the destruction of red blood cells demonstrated by actual count, urine fed through all the geometrical and chemical gyrations of a well appointed laboratory, each constituent named and condemned, bladder catheterized and cystoscoped, nodules microtomed, stained, hardened and mounted and with all fluids and solids, including excrements, microscoped, liver X-rayed for stones, bullets and scrap iron, the history of the case embellished by stating age, nativity, sex, occupation, complexion, financial status or previous condition of servitude, and to cap the climax, a sphygmographic trace is filed with the record. A routine prescription is sometimes built on symptomatology, the patient's pockets well scooped and an early demise is with some degree of certainty horoscoped.

Now, while I think of it, I was accidentally called to a case some years ago. She was a mental non-entity and a victim of the so-called nervous break down; her companion, with grandiloquent flourish and a pitying smile (when she looked at me) gave the minutest details of a machine-made diagnosis, curettement, packs and douches, and a routine prescription of iron, quinine and strychnine. The doctor nonchalantly pocketed her surplus lucre and advised her to travel for her health; she, of course, had the very best service that money could buy, and only wanted temporary relief from pain—a hypodermic of morphia! I crossed my pedal extremities, ran my talons through my limited stock of hirsute adornment, assumed a Soloman-ic pose, and without the thought of playing the role of a Sherlock Holmes, took note of her short hair and blister scars on the nape of her neck, and asked if the lady had ever had meningitis; to her utter astonishment, I had guessed the beginning of the whole trouble; an osmotic ray of light came trickling down through an organized intracranial diapedesis and bade me disregard symptoms.

Did I examine her? No, what was the use. Without even a 'laying on of hands' or further questioning I told her, that, with all the satisfaction born of security, she was peering over the dangerous brink of autointoxication; told her, also, of her constipation, sluggish liver, persistent headaches, white pasty tongue, poor digestion, irregular menstruation, muscular flabbiness and a train of nervous phenomena as long as the moral law.

Oh, it was wonderfully impressive and I was declared to be the only man living that could see through a woman without the aid of fluoroscope or speculum, and advised to fit up an office in a great city and advertise in the public prints. Of course, I disclaimed any such power and declined advice with thanks; I had discovered the cause; effect was 'dead easy.' They readily agreed to take treatment; verily, I believe that if I had had a jack ball, tin pan and a somniferous potion, she could have been induced to eat a box of the Georgia peddler's marac marabulum pills. I gave the lady a full course of calomel with strychnine enough to make it go and a thirty day supply of protoiodide of mercury with an occasional saline evacuant; the result was immediate improvement and within sixty days she complained of complete recovery; she was so surprised at the size of her bill that she paid it like pitching bread to a dog, and I am yet kicking myself for not sounding her exchequer to the bottom.

Now, let us lay aside levity for a few minutes and polish up the pearls if, perchance, we may find them. I, like a great many others, am familiar with the greater number of the scientific modes of arriving at a correct diagnosis and consider them indispensible, but I must say that I very often

find some of them of more value as a placebo in the treatment of a disordered public opinion.

The above case is illustrative of the many successes scored by the modest but studious country doctor, and with such experiences packed away in memory's care, it is passing strange that our State and county associations are largely built of non-resident honorary members who are invited to advertise themselves by taking up the time of such associations reading and discussing their own papers.

There are only one or two other points in this paper, but they are worth more than the time and labor it has cost to produce it. We should bolster up the machines, using the God given senses of touch, sight, smell and hearing and be thankful that taste has not yet come into general use as a diagnostic help except in one's own troubles; study deeper into the laws governing the flow of liquids and their application to the circulation; osmosis, and the power of the human economy to organize loose fluids into pseudo-membranes which must be dissolved by the judicious administration of the iodides and removed with mercury or saline cathartics. It is true that the protoiodide of mercury is at present chiefly used in the treatment of constitutional syphilis because of its double action as a solvent and eliminator, but this very fact suggests a wider field of usefulness, especially in all cases where inflammatory processes have left deposits or pseudo-organisms; the broader use of a sensible proposition will nearly always condemn the shameful practice of specific medication.

There is one other point worthy of men tion; we all attend the same colleges, hear the same lectures, read the same books, 'go up against' varied experiences, and the mere fact that one locates in Chicago, another on the prairies of Texas or becomes a Carolina 'tar heel' does not spell 'difference' and that it is comparatively easy to find a good doctor almost anywhere. A dignified bearing, strict attention to business, and enforced payment of respectible fees will do more than all else toward educating the public to this view.

Bile Tract Infection and Its Sequences.*

By Hugh M. Taylor, M. D., Richmond, Va., Professor of Practice of Surgery and of Clinical Surgery, University College of Medicine; Surgeon Virginia Hospital.

My object in presenting a paper with the above caption is to impress: 1st. The idea that our interest should be centered in bile-tract infection and its sequences rather than cholelithiasis and its sequences. 2nd. That the morbid changes incident to cholelithiasis are insignificant as compared to the direct and indirect consequences of the varying types of cholecystitis and pericholecystitis and cholangitis, local and diffused. 3d. That the term cholelithiasis, while sanctioned by use, is unfortunate in that it does not convey the scope of this important field of surgery as does the term bile-tract infection and its sequences. 4th. Our treatment, medical and surgical, has for its mission a cure of the cholecystitis and cholangitis and to prevent or cure its many morbid processes, one of which is the formation of gall-stones.

The special subject for discussion announced for this meeting is "Gall Stones and their Medical and Surgical Treatment." Such a title is fully sanctioned by common usage, but we think it implies a narrow conception of the subject of bile-tract surgery, and we are surprised that such authorities as Kehr, Moynihan, Mayo Robinson and other path-finders in this field of surgery, all of whom impress the important role played by bile-tract infection, continue to adopt for their invaluable books the titles of "Gall Stones, etc." A study of the subject must, we think, impress the idea that cholecystitis, pericholecystitis and cholangitis, local and diffused, must be studied, certainly in many instances, independently of cholelithiasis and its sequences.

The following cases recently operated upon, serve to impress the not infrequent occurrence of gross lesions independent of gall-stones as factors:

Case I.—A middle age adult; seen with Dr. Virginius Harrison, presented the following history: Had enjoyed good health until the past twenty-four months; then began poor health from supposed indigestion, with discomfort in upper right quadrant of abdomen. There was a history of one or more acute attacks, presumably of acute cholecystitis and cholangitis. *Status presens.* Great emaciation and septic appearance; constant local pain, increased by food to such an extent that the patient was starving himself; occasional rigors and fe-

*Read at the recent meeting of the Tri-State Society of the Carolinas and Virginia, held at Greensboro, N. C.

brile reaction. A tumor, involving the gall-bladder, pylorus or duodenum was easily appreciable, and a tentative diagnosis of carcinoma was made. In view of not infrequent diagnostic error, an exploration was made. We found omentum and bowel walling in an enlarged and thickened gall-bladder, and a spider-web type of adhesions extending over the pylorus and adjacent intestines; and there was considerable hypertrophy of the liver. The gall-bladder was full of dark tarry viscid ropy secretion; no stones were found. As soon as the weight of the gall-bladder was lessened and adhesions separated, bile began to flow into the gall-bladder and appeared at the field of operation. Presumably, the case was one of infectious cholecystitis and pericholecystitis and cholangitis, wide-spread, resulting in inflammatory and mechanical obstructions and hypertrophic cirrhosis of the liver.

Case II.—Now convalescent from operation, was seen with Dr. Geo. W. Gay. A young woman, five months pregnant, gave a history of one previous attack of pain in the upper right quadrant of the abdomen, lasting several days. This was about one year prior to the recent sickness. Since then, while equal to attending to her household duties, she claims she has not been entirely free from stomach troubles. *Status presens.* She was well nourished and had a good color. She had been sick for several days when I saw her, and the attack began with violent pain in the upper and right quadrant of the abdomen and was attended with high temperature, excessive vomiting, local tenderness and right rectus rigidity. A diagnosis of acute infectious cholecystitis had been made by Dr. Gay. An operation disclosed empyema of an enlarged gall-bladder. Presumably, it was a case of chronic cholecystitis, with an acute attack engrafted.

Case III.—Seen with Dr. C. W. P. Brook; was of a somewhat similar nature, except on section we found one non-faceted smooth gall-stone, as large as a pullet's egg, occupying the fundus of the gall-bladder. Both the cystic and common duct were normal in size and patent. A stone of such dimension could not have entered the cystic duct. There was no history of previous attacks of so-called gall-stone colic; no acute attacks of infection. Such a stone could have ulcerated into the intestines or could have grown after lodgement in a duct, but there was nothing to indicate that it was a factor in this case, unless mechanically it lessened the resisting powers of the gall-bladder mucosa and induced an open gateway for a more virulent infection.

Moynihan emphasizes the fact that chronic cholecystitis induces gall-stone formation; the acute, more virulent types of infection, result in empyema, pericholecystitis and crippling adhesions, perforation, gangrene, etc.

A case seen in my own practice is interesting in this connection. I had attended this young woman for years. Beyond a history of a slight attack of enteric fever and occasional attacks of supposed indigestion, she had been equal to the arduous duties incident to conducting a large boarding house. A sudden onset of acute pain in the upper right quadrant of the abdomen, muscular rigidity, local tenderness, fever and vomiting, with tumor formation pointed to an acute infection of the gall-bladder. After a continuation of these symptoms for four or five days, a section disclosed empyema, an enlarged and perforated gall-bladder and a walled in local abscess. There were more than one hundred, large and small, faceted stones but a pervious cystic and common duct. No previous history of jaundice, colic or acute attacks. As far as we could tell, the stones were quiescent sequences of prolonged chronic cholecystitis; possibly of repeated attacks of subacute inflammation, certainly, she had never before had an acute infection engrafted upon the chronic; and the lithogenous products of the cholecystitis were obviously of less importance than the other morbid changes mentioned.

A study of the literature of this subject will, we think, impress the conclusion that the experience here within recorded is common, and tends to support the claim that the infectious inflammation and not one of its sequences, merits the greatest share of our attention.

The bile tract is a great drain—forty ounces a day is the estimated output of bile and to this we must add the gall-bladder secretions and that of the pancreas. The hepatic and common duct are freely flushed by the forty ounces of bile, and hence infection is less frequent.

The gall-bladder and cystic duct are seemingly an estuary of this great drain system, and are not irrigated as is the common duct. If the gall-bladder is a reservoir for the bile, we wonder at its capacity—one ounce for a forty-ounce supply, and it is a striking contrast to the capacious urinary bladder and the large bowel. We know of no instance in which nature calls upon a single duct to carry a current of fluid into a hollow viscus and by the same route, a current out again.

As in the case with the appendix, the gall-bladder is a favored harbor for microbic life. Bile-duct stasis plus bacterial infection of an attenuated type is the initial step in gall-stone formation. Gall stones are sequences and not causes of cholecys

titis. It is claimed by Hans Kehr and others that they are inert sequences in all but five per cent. of the cases; quiescent in ninety-five per cent. of cases to the extent that they do not give rise to such expressive symptoms as colic positive pain right rectus rigidity, jaundice, etc. Only five per cent. migrate into the cystic or common duct and not all of these produce obstructive symptoms. Kehr found jaundice absent in thirty-three per cent. of cases, with stone in the common duct, and Mayo in one-third of such cases.

We have typical so-called gall-stone colic and no stone. We have stones impacted in the duct and no colic. If the pain is due to acute cholecystis and cholangitis, is it not probable, since we have obstruction and no stones, that much of the obstruction, even while a stone is present in the duct, is due to the infection involving the mucosa, submucosa and peritoneal investment of the duct? Stones stay in the duct and grow large, and no colic is induced. The duct tolerates drainage tubes without colic. The ball and valve action of Fenger renders complete obstruction by stone in the common duct a matter of short duration. It is the prolonged chronic cholecystitis that produces the thickened and contracted gall bladder. It is the pericholecystitis that cripples the digestive apparatus. It is the cholangitis, local and diffused, that induces much of the bile-tract obstruction and the wide spread morbid changes of such varying character. Hans Kehr quotes Riedel as claiming that there are 2,000,000 cases of gall stones in the German Empire all of time. Certainly not in every case of cholecystitis, perhaps not a majority of such, result in gall-stone formation any more so than does every case of urinary infection result in stone in the bladder. Only the milder types of infection, according to Moynihan and Rollestone, induce lithogenous products. If gall-stone cases are so common, how much more common must be bile-tract infection, since in not all cases are stones included as one of its products. The gall-bladder is the puddling point and the common site for the beginning of the infective process, which may be local or may invade widely the complicated bilious drain tract with disaster to liver, pancreas, etc.

Colic, local tenderness, muscular rigidity, fever, even jaundice and all grades of local gall-bladder inflammation are too common in the absence of stone to fail to impress the idea that operative intervention has a mission beyond removal of the lithogenous concretions. Notably Hans Kehr impresses the idea that medical treatment should only essay to reduce the acute or chronic inflammation, eliminating thereby the factor which disturbs the quiescent state of the stones. It is bad practice, even if we could, to drive the stones from gall bladder, where they are comparatively harmless, into the ducts and add mechanical obstruction to inflammatory; and as we have mentioned, it is then a hard problem to say how much of the obstruction is due to the stone and how much to the inflamed drain tubes.

By medical treatment, rest, regimen and remedial measures, in the shape of topical applications, we can hope in many instances to bring about a quiescent condition of the infected bile tract and the stones, if they exist. In only from 80 to 90 per cent. of cases of gall stones do we have jaundice. Cholemia is much dreaded. It has always been an open question with me, "is it cholemia or is it a toxemia from infectious cholangitis diffusa, perhaps extending per the ducts of Wirsung and Santorini and involving the pancreas?"

Free irrigation of the common duct is a blessing. The source of infection is designated ascending or descending, hematogenous or duodenal, but in either event it is the irrigation and natural drainage which conserve the integrity of the function of this part of the drain tract.

What good will be accomplished by regarding the bile-tract infection and its sequences as vastly more important than the gall-stones, active or quiescent? At least, we will no longer essay to dissolve the stone or to drive it from its safe harbor. We will appreciate the facts (a) that the sluggish bile circulation plus infection is the first step in the morbid process so far reaching, and (b) that removal of the gall stones where ever they are located fulfills but one indication in the surgical treatment of bile tract infection and its sequences. The treatment of the first implies a consideration of such scope that we cannot dwell upon it. Rolleston, in his masterly work, "Diseases of the Liver, Gall Bladder and Bile Ducts," page 764, enters fully into this interesting phase of the subject. We can not hope to cure or aid nature in her efforts to cure a case of gall stones; but we can hope to prevent bile tract infection or to cure it before it has extended to one or more of the important adjacent viscera. Along such a line of teatment it would appear that the Internist's efforts may be crowned with success.

The limitation of surgery in the field of bile tract infection extend far beyond the removal of gall stones. The end results have forced this conclusion upon those of greatest experience. Cholecystotomy removes the gall stones, but in the recorded

experience of many, does not cure the patient. Why? Because it does not cure the cholangitis and cholecystitis. Cholecystectomy often leaves an infectious inflammation involving the cystic, common or hepatic ducts and their ramifications. More and more the conviction has been forced that even in uncomplicated cases removal of the gall stones does not give satisfactory end results, because we have only eliminated one of the sequences and not the disease. A study of this subject at the hands of those whose opinions merit our greatest consideration, impresses the fact that the key to success is drainage (cholecystostomy or per common or hepatic duct) prolonged drainage until the infection in the gall bladder and ducts has subsided. Dr. Maurice Richardson tersely puts it, "from study and experience, therefore, I am lead to the conclusion that the essential thing in the surgery of the bilious tract is full free drainage, allowed to persist until it closes spontaneously." A problem of great interest is, "when shall operative intervention be instituted to prevent the sequences of cholecystitis and cholangitis?" An acute conception of the gross, multiple morbid changes possible and probable and without, in all cases, evidences commensurate to the damaging changes existing or impending, is essential to a due appreciation of the importance of early and preventive surgical intervention. Dr. Wm. Musser says, "The era we are about to enter bodes for good." It looks as though we would go through the cycle of activity and inactivity as in early periods of appendicitis in the treatment of gall bladder infections. Let us see to it that the primary ailments are cared for, blocking thereby the oncoming conditions. Fifty years from now, the secondary pneumonia will be as rare as those which are secondary to disease now removed early as catarrhal appendicitis, vesical calculus and a score of other conditions. Students of that day will marvel at the reports of cases of the present day. (Congress Amer. Phy. & Surg.)

Dr. Jonas, of Omaha, a victim of the disease and recently returned from Carlsbad, impresses the idea "that removal of the stones neither removed all of the existing infection nor results of past infection." Dr. Bacon Saunders writes, "so gall stones have had an undue influence assigned them. In the light of the above facts, a more comprehensive and pathologically accurate term for these conditions would be gall-bladder infection or bile-tract obstruction; infection, whatever the factors in its excitation, is the source of the greatest disaster in gall-bladder and bile-tract obstruction."

Early intervention has for its mission to cure the infection of the bile tract and to prevent one and all of its many possible sequences; and it is conservative. An uncomplicated cholecystostomy stands in the same relation as an appendectomy in chronic or subacute appendicitis or the early operation in the acute type. Local peritonitis in the upper right quandrant, a sequences of bile tract infection, while it possibly does not as often kill as quickly as infectious in the lower right quadrant, may do so; and is capable and often does destroy life and health through its crippling effect upon stomach, pylorus, duodenum, kidney, liver, pancreas, etc. It is an extensive and compiicated drain tract. Its infection is common. Disaster may be rapid. On the other hand, insidiously through diverse ways, it may as surely destroy health and life. The integrity of the drain tract is the key to the successful treatment of bile-tract infection.

Pemphigus Contagiosus Containing Leishman Bodies.

Turner (Journal of the Royal Army Medical Corps) refers to several cases of this nature which came under his notice among the British soldiers at Multan. The author says that the sore, on exposure, presents a pinkish, slightly glazed-looking patch, in the earlier stages, but becomes a dirty ashy-gray color later on, and is covered by a varying thickness of disintegrated tissue. When this tissue is scraped off gently, it leaves a bleeding surface. He examined these scrapings on prepared slides which were stained by Leishman's method for malaria. He discovered Leischman bodies in great numbers in some cases, and fewer in others. The bodies are oval, sharply aefined in outline, with one end rounded dnd the other pointed. They measure from 2 to 4 μ in length. Inside the body is a nucleus which stains lilac and occupies from a quarter to sometimes half its size. It is peripheral in position, and may be circular or variable in shape. A smaller chromatin spot which is always circular is near the nucleus, while adjoining the nucleus is a part of the body which does not stain, and beyond this is the stained periphery. These bodies appear to be identical with the Helcosoma tropicum of Wright, which causes the Oriental boil, and so it is thought reasonable to conclude that the "Multan sore" has an origin in the vasicular disease of pemphigus contagiosus. These cases were treated in the following way: The blisters were first removed, the sores scraped, and antiseptics applied. One of the slides was examined by Semple of the Pasteur Institute of India, and he pronounced it to contain Leischman bodies.

Induction of Labor, Especially as Regards the Fate of the Children.

Lorey (British Gynecological Journal) mentions the disfavor in which the induction of labor has been held, quotes the authority of Kroenig, who in his work on the "Contracted Pelvis," published in 1900, declares that this proceeding does not offer a better prognosis for the children than expectant treatment, even with the possibility that at term symphyseotomy or Cæsarean section might be declined and perforation be obligatory; moreover, that this is especially so in the degrees of contraction in which induction has principally to be considered.

In view of this condemnation Lorey has analyzed 137 cases from the Klinik at Halle, till lately under the direction of Professor Bumm, and finds that in 100 labors, in 82 women with pelves exhibiting a contraction varying from 6.5 to 10.25 centimeters, the induction of labor resulted in the delivery of 74 children alive and 26 stillborn; during the ten days after birth 13 other children died, giving a total mortality of 39 per cent. Now these 82 women had had in previous labors 207 children, of which 196 had been born spontaneously, or at all events without either the induction of labor or Cæsarean section, and the immediate mortality of these 196 children exceeded 78 per cent. In the contractions of the pelvis, therefore, the results of the premature induction of labor as regards the children are twice as good as spontaneous delivery or extraction by forceps, or after version.

Nevertheless, induced labor does not begin to give satisfactory results unless the contraction of the pelvis is as low as 8 centimeters and the pregnancy has reached the thirty-sixth week at the least.

As regards the further fate of the children, 40 of the 56 of whom Lorey was able to get a report lived more than a year—a proportion of 71.4 per cent, or 73.2 per cent if one abstracts one case of infanticide. Indeed, deducting 5 illegitimate children, including the one killed by its mother, we find that of 51 children delivered prematurely and discharged alive from hospital only 11 died in their first year, a mortality of 21.5 per cent. Now the general mortality of children in their first year in Halle is 24 per cent.

The length of gestation is most important. Of the infants born before the thirty-fourth week not one lived for a year. The induction of labor before the thirty-fifth week may be deemed equivalent to perforation, and is only to be performed in the interests of the mother.

Relationship between Colitis and Appendicitis.

Lockwood, in British Medical Journal, states that it is easy to understand how an appendicitis may give rise to a colitis by contiguity, and this inflammation may spread up the ascending colon and into the other parts of the large bowel. In fact, the colitis may be so prominent as to overshadow the symptoms pointing to appendiceal inflammation. The familiar form of mucous colitis, due to coprostasis, may be indirectly caused by appendicitis, since the latter disease often causes constipation, probably by interference with nervous mechanism of the bowel. He mentions two cases in which a colitis obscured a coexisting appendicitis because the inflamed appendix was situated behind a distended right colon; when the latter was cleared of gas and feces, the appendicitis came to light. The form of colitis, termed mucomembranous, may exist for years without any serious disturbances; but it is possible for the same process to extend to the mucous membrane of the appendix, and in this case the peculiar anatomic features of the organ greatly increase the dangers of the disease. A true ulcerative colitis may also extend to the appendix, adding an additional element of danger to an already serious condition.

Radium in Naevus Carcinoma.

Hartigan (Brit. Journ. of Dermatol.), reports two cases successfully treated by radium bromide. The first was a large port wine nævus affecting the whole of one cheek in a woman of twenty-six years. The treatment lasted nine months, during which thirty-nine exposures were given, varying from half to one hour. The nævus entirely disappeared, with the exception of a few untreated areas. The amount of radium used was 10 milligrammes. Usually within twenty-four hours an erythema occurred, followed by vesicles, which fell off as scabs in a few days, leaving behind a thin white skin. The second case was one of schirrus of the mamma in a woman of sixty-six years, of sixteen years' duration. Operation was declined. There was an ill defined lump in the breast, retracted nipple, adherent and puckered skin. Three years ago the skin ulcerated and bled a good deal; much pain; no glandular enlargement. The patient received forty applications of radium bromide, lasting twenty minutes each. Twenty milligrammes of radium were used. The pain disappeared, hæmorrhage ceased, and the ulcer began to heal. Later the growth disappeared and the ulcer had healed.

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YELLOW FEVER.

Although the present epidemic of yellow fever seems to be limited to New Orleans and its neighboring towns, there is yet a feeling of anxiety in regard to a more widespread distribution. This becomes especially interesting when we remember that notwithstanding all the precautions taken, there are so many ways in which an inland quarantine can be evaded that no susceptible community can tell when it may be invaded.

In spite of the fact that its method of transmission by certain species of mosquito the stegomyia fasciata has been demonstrated and the spread of the disease can be surely prevented by the immediate and complete screening of the patient against this insect we find that it has spread and continues to do so. Therefore, in all susceptible communities every case in the least resembling yellow fever, whether called malarial fever or dengue, should be rigidly screened until the diagnosis is settled beyond peradventure

The preventative measures advocated by Reed are as follows: The prevention of importation of cases of the disease from infected localities, and when cases do appear the application of measures to protect the sick from attacks of mosquitoes. Screens should be used for this purpose and even the dead should be thus protected for stegomyia will bite even these. All mosquitoes in a house where a case occurs should be caught and search should be made for them in all the houses in the immediate vicinity. They may be destroyed by fumigation with sulphur dioxide (one pound of sulphur for each 1000 cubic feet of air space). Non-immunes entering infected houses are advised to rub all exposed surfaces, including the ankles, with spirits of camphor, oil of pennyroyal, or 5% menthol ointment. These are only temporary protective agents.

Although the state and municipal boards of health have certain duties that they and only they can most satisfactorly perform, yet there are other points, other duties that can be best, if at all controlled, by the National Government. Therefore, the municipal and sanitary authorities of New Orleans requested the United States Government through its department of Public Health and Marine Hospital Service to take charge of the matter in the city.

Dr. Souchon of the State Board, and Dr. Kohuke of the City Board of Health, realizing that the state and municipal boards were not competent to cope with an invasion of so serious a character and that the more powerful forces of the National Government were essential and therefore employed the strongest and best measures for the benefit of all concerned, which is the highest aim of all public officials.

State sovereignty and State rights are well enough when they meet the requirements of the occasion; but when they fail to meet the requirements in the face of death and danger, as they have so often done in the past, the people will not be deterred by sentiment from accepting services that are affectual.

The treatment of yellow fever put forward by a homeopathic physician of St. Paul, Minn., by the name of Dr. R. B. Leach, was arseuious acid. He also claimed that this drug would render the individual immune to the dread disease. There was no scientific evidence to substantiate his theory from the beginning, and now that more than a dozen have died who took this treatment for a sufficient length of time to be immune, the most enthusiastic have given up their views as to its efficacy.

TUBERCULOSIS AND TRAVEL.

Dr. Trask of the Public Health and Marine Hospital Service, has recently contributed to the Journal of Military Surgeons a very valuable paper dealing with the dangers of the unrestricted travelling of consumptives on railways and steamboats. A consideration of this subject is certainly timely. It is a subject that ought to be discussed oftener. The unrestricted travelling of tubercular cases on our sleeping cars is much more dangerous than the public believes. Only a few nights ago the writer was kept awake on account of the coughing and spitting of a tubercular case opposite him on a railway car. This class of suffering humanity has our sympathy, they deserve every consideration possible, but they should not be allowed in this way to endanger the lives of so many people. This person did not even have a cup, but used a large handkerchief or towel. Just how the prevention of this present system can be regulated is a long story—a difficul problem, but the matter ought to be agitated until something is done in the way of preventing this source of the spread of consumption. The public health authorities quickly isolate patients with diphtheria, smallpox, scarlet fever, and yellow fever.

We would not think of allowing their transfer on public conveyances, but a person afflicted with tuberculosis, a disease

killing many times the number of all these maladies combined, travel all over the country any where in the cars they wish without any restriction whatever. Dr. Trask suggests that each car be disinfected at the end of each trip, that common drinking cups be abolished, that dishes used in the dining car be immersed in boiling water in addition to their mechanical cleaning, and that blankets used in sleeping cars be sterilized. He further suggests that the railroad should furnish sputum cups and provide passengers with them when necessary, and that they should have special compartments for consumptives on through trains to the tubercular resorts in the Southwest. These suggestions seem to be radical, certainly they will appear so to the railroad officials, but it will take radical measures to cope with the spread of this disease. It would be quite practical and quite beneficial if cars were properly disinfected and fumigated at the end of each run. It hardly seems to be practical as the doctor suggests to have separate compartments for consumptives, the number is hardly large enough for that. But it could be a national violation of the health laws for the consumptive not to notify the railroad authorities of his condition so that he could be furnished a compartment that would isolate him from the other passengers.

AUTHORITIES AND MEDICAL WRITERS.

It is not often that a medical witness in a suit where a medico-legal point is involved feels exactly at ease and sure that somewhere during the cross-examination his opinion will not be depreciated. The medical witness makes a serious mistake in the court room if he admits that any writer in medicine is authority. When he does that, he has no right to disagree with the writer, his author, or his designated authority, and the attorneys in the case will constantly remind him of this fact. Really he has no right to say—really it is a foolish thing to say—that any book on medicine, certainly on the practice of medicine, is authority. Dozens of useful men and great men write books on the theory and practice of medicine, each differing a great deal in their opinions. Their books and their writings may be valuable, yet many of their opinions will not be accepted by the entire medical profession. In our courts the opinion of the Supreme Bench is authority. We have no medical books or medical writers that are authority in this way. We regard oftentimes the opinions of certain medical writers with great confidence, but we do not regard them as authority, only authors. Whenever a medical witness is asked if a certain man who has written many volumes is authority, he should say that we have no authorities in medicine and that the gentleman in question is a writer, and in his writings has only expressed his individual opinion about certain medical subjects. A student in medicine who has had any great amount of medical experience does not agree, really he cannot agree, and does not believe everything that he reads in every valuable medical book, but bears in mind the opinions of others and forms his own conclusions.

THE JAPANESE PHYSICIAN.

The people of no other oriental country is more closely identified with the English annals of science and literature, especially that pertaining to microscopy and chemistry, than the Japanese. The writer does not intend this to be considered a very great compliment to these people, for no other oriental nation except the Japanese has accomplished anything in these collateral branches of medicine. The Japanese character is peculiarly suited, especially among the educated classes, for deliberate, painstaking, original research. This with their fairly bright intellect has in a few instances demonstrated to the world that they are a people capable of something to the science of medicine, adding the departments of chemistry and microscopy, but it is a mistake, really foolish to class these people in a general way to the Germans, or to the French, or to the English. The Japanese chemical laboratories and their microscopical laboratories are especially well equipped, by far better than any other of the departments in their teaching institutions. This has been brought about because no doubt they recognize themselves that these departments are of more interest to them and that they are capable of doing better work there than anywhere else. In these departments they have added something to medical literature that has been valuable, but no where else. The Japanese student seems to be perfectly satisfied when he can sit on the bare floor with his microscope between his legs and work for hours and hours, seemingly never getting tired fixing and refixing over and over again his specimens. He has far greater patience than students in this country when it comes to this kind of work. Their papers when dealing with these subjects, record long and patient laboratory investigations, far fuller and more elaborate than manuscripts published in this country. They discuss many subjects pertaining to microscopy and chemistry with a freedom and ease that is astonishing. Many of the modern and abstruse theories bearing upon

these subjects seem to be perfectly familiar to them. Abdominal surgery and capital surgical operations do not interest the ordinary Japanese surgeon. In minor and plastic surgery they are very skilled. They seem to like and take pride in working at small things. They are very particular, pains-taking and deliberate. An operation that we would perform deliberately in an hour will take a Japanese surgeon at least three or four hours to perform. It is very common now to hold up the Japanese as among the greatest scientific people in the world, especially in medicine and surgery, yet the writer has seen within the last five years cloth-covered chairs in their operating rooms; tubercular cases in their general wards, and they do not consider it objectionable to have an old dirty carpet on their best private rooms in their hospitals. We are not now in a position to know anything about how well they have conducted the medical and surgical affairs of the late war. This department has been kept private and they have let us know as little about it as they possibly could. It may have been very fine, or they may have made many failures —it may be full of defects for all we know. It is very doubtful whether the western world will ever know the mistakes the Japanese physicians have made during this struggle with Russia.

THE DENVER MEDICAL TIMES.

For twenty-five years this journal has been recognized as the leading medical magazine of the West. Dr. Thomas H. Hawkins has been its accomplished editor. He has now resigned this position and a stock company has been formed with Dr. Bonesteel as managing editor, Dr. Hawkins book reviewer, and Dr. Hill has charge of the abstract department. The editorial staff consists of about twenty-five well known western physicians and surgeons. The financial, or business part of the journal will be in the hands of non-medical men. The business side of a medical journal is so closely associated with the ethical or medical side of it, until it has always been a question in the writer's mind whether it is a good policy to let non-medical business men control the business policy of a medical journal. The Denver Medical Times has, however, for many years taken a very high stand among medical journals, and with this change in its management we hope it will still remain in the lead.

AMERICAN MEDICAL EDITORS' ASSOCIATION.

Dr. F. E. Daniel, ex-president of the Texas Medical Association and editor of the Texas Medical Journal, presented the following resolutions at the recent meeting of the American Medical Editors' Association:

Whereas, There is a wide and growing dissatisfaction with the management of the Journal of the American Medical Association, principally because of the appearance in every issue of advertisements of proprietary medicines, with and without formulae, and that dissatisfaction is intensified by the declared policy of discriminating against such proprietaries as do not furnish the formulae for publication; and

Whereas, The use of such proprietaries being declared by said journal to be unethical, it is absurd to bring them to the attention of readers in every issue with the tacit endorsement that publication gives them; and,

Whereas, The Journal A. M. A. is self-sustaining and does not need the revenue from such source;

Resolved, That it is the sense of the Association of Medical Editors of America that the Trustees of the Journal should prohibit absolutely the publication in the pages of the Journal any medicine advertisements whatever, and that this policy and principle should apply to all journals published by and for the several State Associations, and we hereby call upon said trustees to at once make a change in the editorial and business managoment of the Journal, believing that only such a course will restore harmony in the ranks of the medical profession.

It would have been well enough, really it would have been wise if the American Medical Editors could have had these resolutions in time to have thoroughly considered and adopted them. They are timely and to the point and the sooner the American Medical Editors realize the situation as Dr. Daniel sees it, the better off they will be. There is no doubt that there is a wide and growing dissatisfaction with Dr. Simmons method of conducting the Journal of the American Medical Association. It is evident and the members of the American Medical Association are beginning to realize it that he is not the man for this important position. His method and future policy are very apparent, and his ideas appeal no doubt to a great many members of the medical profession of the country at this time because they are not directly concerned and they have never thought of the far reaching consequences of his methods if he succeeds in accomplishing all that he intends to accomplish. The policy of the Board of Trustees of the Association, which is really the policy of Dr. Simmons is to conduct the Journal on the same principles that it has been conducted for the

last few years, except on a larger scale. He encourages each State Society to create its own journal, and maintain and patronize no other monthly publication. These journals to be indirectly under the control of the Journal of the American Medical Association. After awhile Dr. Simmons will endeavor to make every member of each State Society a member of the American Medical Association in the same way that a member of a County Medical Society becomes a member of the State Medical Society. When he secures this relationship between the State Society and the National Society he will have as subscribers to the Journal of the American Medical Association in the neighborhood of ninety per cent. of the medical profession of the United States. When they get all of the links of their chain complete they can control ninety per cent. of all the advertising and subscriptions to medical journals in the country. This will crush all independent medical journals.

Whether Dr. Simmons will ever be able to accomplish this is to be seen. If he does it will take him some time, and certainly he will have a great struggle in reorganizing the medical profession and the medical Press and the medical organizations of the country along these difficult lines. It would be easier and thoroughly practical and the proper way to get at it, as Dr. Daniel suggests, that the Journal of the American Medical Association and all the State Medical Journals publish no medical advertisements whatever, then graft and commercialism would not be so much in evidence and the Journal of the American Medical Association would be run as it now pretends to be run for purely scientific purposes. If a State Medical Society wants to get out its transactions in pamphlet form, or in Journal form it can do it with just as little expense as in volume form. This method, however, never appealed to the writer and it will be a long time I hope before any othar sentiment prevails in North Carolina.

The Journal of the American Medical Association is easily self-sustaining, if it carries no advertisements whatever. If it is not, it ought to be, and there is something wrong in the management of its financial affairs if it is not self-sustaining without the aid of its advertising pages. We are glad that Dr. Daniel offered these resolutions and we hope too that they will be presented either in this form or one fully as complete at the next meeting of the American Medical Editors' Association.

Review of Southern Medical Literature.

Southern Medicine and Surgery, August, 1905.

The Treatment of Typhoid Fever in Small Towns and Rural Communities.—Dr. Albert H. Freeman regards proper prophylaxis of first importance in the control of typhoid fever, as it is clearly a preventable disease. The fact that it occurs year after year in city, town and country alike is proof that efficient preventitive measures have not been used. The drainage of the town should be improved, surface wells discarded and artesian or rain water secured, and in the country wells can be placed where infection will not occur from barns or privy-vaults. The thorough and effective disinfection of the excreta from patients suffering from typhoid fever will do much to eradicate the disease. This can be accomplished in numerous ways. Any of the following solutions may be poured into the vessel containing the stools and urine for both are swarming with the bacillus of Eberth and must be rendered sterile if our purpose is accomplished. After covering the excreta with the solution allow it to stand one or two hours, then bury in a deep hole and cover with lime and wood ashes. Solutions 1-5000 bichloride, 1-10 carbolic, etc. All utensils, bedding, clothing, etc., from the sick room should be disinfected before being used again. The nurse should disinfect her hands after each handling of the patient. Milk should be pure or pasteurized and drinking water suspected of contamination should be boiled before using.

In the treatment of this disease the author points out the difficulties encountered while treating a case of typhoid fever without a trained nurse, recommending liquid diet, hydrotherapy, less dependence on drugs for lessening temperature.

The antiseptic treatment he believes lessens the absorption of toxines and prevents the invasion of other germs that might cause serious complications. It deoderizes the stools and lessens the diarrhoea.

Virginia Medical Semi-Monthly, August 11 1905,

Diagnosis and Treatment of Stricture of the Urethra.—Dr. Lawrence T. Price divides the diagnosis of stricture into subjective and objective signs, The patient will in all probability complain of pain existing only during the act of micturition which varies in degree and location according to location of stricture. May have great difficulty in beginning of the act after some minutes of straining, when he succeeds the urine may be preceded by a small amount of gleety bloody discharge. The stream

will in most cases be changed in character depending on the nearness of the stricture to the meatus. If the stricture is far back in the urethra it may exist for a variable amount of time without giving any evidence in this respect. The stream may be small, even the size of a pinhead or less, may be double pin-shaped, flat, or gimlet. Later on there will be diminution in the expulsive power of the bladder due to atony, also dribbling of urine which is due to retention and overflow. Retention may be caused by congestion of the mucus membrane covering the stricture, or as a late symptom dependent upon the obstruction offered by the stricture itself. Congestion of a stricture during colitis may cause great pain, premature or delayed ejaculation or dribbling of semen after the act has been completed.

Objective signs of stricture are best determined by the use of the bouge a boule. There are three conditions which may be mistaken for organic stricture, namely, the normal narrowings at the meatus middle of the penile portion and the membranous urethra; second, spasm of the urethral canal which is almost always experienced in the membranous urethra. This spasm will, if steady pressure is kept up with the instrument, allow it to pass in a few seconds; the resistance, unlike that of stricture, begins gradually and decreases gradually; third, an enlargement of the prostate. This can be verified by examination per rectum. After reviewing the various results of stricture the author recommends: first, dilitation which may be intermittent, rapid, forcible or continuous; second, urethrotomy, either internal or external, or a combination of the two; third, pereneal section; fourth, miscellaneous methods.

Under the miscellaneous methods electrolysis divulsion and cauterization are condemned.

Gaillard's Southern Medicine, August, 1905.

The Prevention of Hernia Following Abdominal Section—The Immediate Secondary Operation in Drainage Cases.—Dr. R. L. Payne gives the following rules which insure the largest percentage of succeeses in clean operation in all laparotomies:

1. Always make the incision along the line of the muscle rather than in tendinous lines.

2. Never cut the muscle but separate the fibers with the handle of the knife.

3. Suture the wound in layers, making careful approximation of like tissues and paying special attention to the closing of the aponeurosis, since in this lies the greatest strength of the abdominal wall.

4. Be exceeding careful of the haemostasis and of leaving dead spaces in the wound for no matter how much you may try there is no absolute asepsis and bloodclot in dead space affords the most favorable culture medium for the growth of germs and separation in the wound weakens permanently the abdominal wall.

These rules will usually suffice to prevent hernia, except in those cases in which drainage must be resorted to and where we must depend on the granulations for a strong fibrous tissue formation. The following method is advocated as soon as the granulations are up to a level of the muscles of the abdominal wall, the patient is etherized, the surrounding skin made clean and the whole surface of the granulating wound dried with sponges and mopped over thoroughly with pure carbolic acid to render it as aseptic as possible. An incision is now made outside of the scar tissue just beyond the limits of the original wound and this incision is carried down through the aponeurosis into healthy muscular tissue. The scrr tissue and the granulation tissue is now dissected out with great care in one piece. The greatest care is exercised to avoid cutting through the peritoneum on the one hand for fear of infecting the cavity, and equally great care to avoid cutting through the granulations from below so that the bottom of the wound may be perfectly clean. Having finished the dissection the edges of the aponeurosis and of the skin are freed by a few touches of the knife. The wound is now sutured with interrupted sutures of silkworm gut, being careful to include the aponeurosis in each suture and to use a sufficient number of sutures to close the wound accurately. The author has used this method in twelve cases, and in each case has obtained primary union. One case several weeks after apparently good union had taken place, suppuration occurred and the wound had to be reopened. Several of these immediate secondary operations have now stood the test of two years and in none of the cases has hernia resulted.

The Southern Clinic, August, 1905.

Treatment of Urethral Stricture.—Dr. C. A. Bryce recommends very highly the use of the galvanic current for the treatment of these conditions.

Nashville Journal of Medicine and Surgery, August, 1905.

Report of Surgical Operations at the Private Surgical Infirmary of Drs Chas. S. and Samuel S. Briggs During Its Fourteenth Season from Sept. 10, 1905, to Aug. 1, 1906.

Texas Medical Journal, August, 1905.

Some Remarks on Fracture of the Head of Femur.—By Dr. T. J. Bennett, Austin, Texas.

Maryland Medical Journal, August, 1905.

Present Decline of Malaria in Maryland.—By Dr. Wm. T. Watson, Baltimore.

Atlanta Journal-Record of Medicine, August, 1905.

Etiology and Pathology of Disease.—By By Dr. J. T. Roan.

Memphis Medical Monthly, August, 1905.

Oxidation, Radiation and Internal Evaporation in the Cure of Consumption.—Dr. E. H. Randle says that the air in a well ventilated room is as fresh and pure as that out of doors and that the reason that out door exercise is recommended by physicians for consumptives is that there is an increased consumption of oxygen caused by the changed conditions. Whatever increases the consumption of oxygen serves to purify the lungs. Cold weather requires more oxygen than warm weather to keep up the fires of the system. Oxidation in the body does two things: it produces heat and performs work. As to which the consumption of fuel in the body does—heating or working—is to some extent a matter of habit.

A man laboring all the week in the sun suffers with heat but little because the oxidation within him produces more labor than heat. But when he spends Sunday in the shade doing nothing the consumption of oxygen, though much less than during the week days nearly all goes to generating heat.

The patient, however, must not exhaust his body by exercise to benefit his lungs; nor must he seek cold weather too freely, for in that there is too much danger of taking cold. And it is too difficult to keep the temperature of the body well regulated. Hydrocarbonacroes foods are great carbonizers, hence good for warmth and work, and especially to be recommended to consumptives and laborers. Starchy and saccharine foods are also good oxidizers, but do not burn quite so freely as oily foods—the difference resembles that between oak and hickory as fire wood.

Alcoholic drinks increase oxidation more perhaps than any known medicine or food and highly beneficial in clearing the lungs of impurities. But such drinks do their good by reducing the system and destroying the vitality of the body. Oily foods supply fuel to the furnace, but alcohol burns the furnace itself and must soon destroy the heating apparatus itself, and then the consumptive is beyond curing. The science of radiology must soon become one of the important departments of medical education. In the sunbeam many rays besides those of light and heat are found, the actinic or chemical rays the white hot rays from nearly all of the metals and from nearly every metal and from nearly every element found on the earth are found also in the sun. Sun heat passes through glass while fire heat is transmitted by it no more than through a plank. In outdoor exercise the patient gets the energyzing rays of the sun to quicken the chemical and physical changes of the body necessary for work and for eliminating the effete matter of the system. But the work of the sunbeam unaccompanied by exercise is sickening, and it is therefore the work of the actinic rays and not the heat rays, for fire heat has no active or metallic rays and produces no such effect. The most favorable conditions for the vaporization and exhilation of carbon dioxide and water from the lungs in a dry dense atmosphere and moderate exercise. Whatever favors oxidation in the lungs favor internal evaporation and also applies to internal evaporation. Therefore let the consumptive take much outdoor exercise, especially early on frosty mornings when the system is in a better condition to resist taking cold than at any other time. Exercise will appetize him for oleagimous foods which will strengthen him for exercise.

The Medical Recorder, August, 1905.

Value of the Crochet Needle in the Treatment of Sinuses Due to Infected Ligatures.—Dr. C. Jeff Miller says that a deep sinus leading to an infected ligature or foreign substance is often intracticable to treatment that operations much more serious than the original are sometimes necessary for their cure. During the past year three cases of discharging sinuses have come under the author's observation, all resulting from silk ligatures, and in each instance the offending substance was removed by the simple procedure of introducing an ordinary crochet needle into the bottom of the sinus and gently dragging it along the walls. The beard on the needle easily picking up the loop and was removed. This seems like a very simple suggestion, and no doubt has been used by many surgeons, yet it saved two women from major operations who had been advised that nothing else could be done.

The American Practitioner and News, August, 1905.

Dr. J. Rowan Dorrison looks upon gastric or peptic ulcer as not so uncommon a disease as post-mortem records show 1 to 5 per cent. of all autopsies. More often the scar of an old ulcer is found than the open ulcers.

The condition is found frequently in servant girls and domestics. Whether this is because they lead irregular lives and pay little attention to the food or hygienic surroundings or whether it be that they compose a large class of patients from which we get our statistics is a question that is not definitely settled. Shoemakers, tailors, and men working at trades where there is more or less constant pressure over the region of the stomach from their position or from the instruments with which they are working compose another considerable class of cases. Also tight lacing in women is said to be another potent cause. The peptic ulcer may be anywhere in the stomach or first part of the duodenum above the opening of the common duct. Mays has reported a most interesting series of cases occuring in the duodenum.

The pronounced symptoms of gastric ulcer are pain associated with tenderness, vomiting and vomiting of blood and increased hydrochlonic acid. Sometimes the only symptoms complained of until there be a hemorrhage or signs of perforation is an ill defined dyspepsia.

Pain is present in most all cases and comes on in 24 minutes to two hours after eating and is worse at the height of digestion as it is caused by the food and the increased acidity at the time. Some patients say that the pain is relieved soon after eating. This condition is found in persons having a constantly increased hyperchorhydria and is due to acid being mixed with the food, thus rendering it less irritating to the ulcer.

The pain is burning in character and is often extremely severe and continues until the stomach is emptied of its contents when it subsides, leaving a feeling of soreness. If there be a contracted pylorus with a delay of food, or if there be adhesions to other organs the pain usually continues for a long time. It is usually confined to a limited area over the epigastrium and frequently to a corresponding area in the back between the 7th and 10th dorsal vertebra. If there e adhesions to other organs the pain may radiate in any direction. The tenderness is found over the area occupied by the ulcer, and is limited in extent. It is also frequently found posteriorly. This tenderness is more severe than in any other disease of the stomach.

Vomiting often occurs at the height of pain and causes relief of that symptom. The amount of blood may be so small as to require a microscopical examination to detect it or it may be so large in amount as to ause collapse and death.

The color and character of the vomited blood depends on its quantity and the time it stays in the stomach. If vomited at once it will be bright red, if retained for some time it will be blackish and disintegrated. The blood may pass into the intestines and cause tarry stools. The treatment recommended is that usnally followed out in hospital practice.

Mobile Medical and Surgical Journal, August, 1905

Non-Operative Treatment for Retrodisplacement of the Uterus.—Dr. W. Pt McAdory looks up the preventitive treament as the most important non-operative method of treatment. In those cases that already exist he places the patient in the knee-chest position and retracts the posterior vaginal wall. With the ballooning of the vagina and falling downward of the abdominal contents the uterus will frequently fall back in normal position. If it does not the fundus is pressed forward with the finger or firm ball of cotton held in dressing forceps; if this does not work pull the cervix down, at same time pushing forward the fundus it may be necessary in some cases to give anesthetic. The patient is then placed on her back and examined to see the new position of the uterus, if in proper position, she is again placed in knee-chest position and the uterus secured in position with tampons of cotton or lambs wool. Several small tampons seem to answer better than two or three large ones. The first tampons which are usually moistened with ichthyol and glycerine are placed in the vault of the vagina which is practically filled, then one or two are placed in front of the cervix. The woman is then instructed to be in the Sims position as much as possible and to assume knee and chest posture three or four times a day. The tampons are left 48 hours, followed by hot douche. After the second or or third treatment allow the tampons to remain out all night giving careful instruction that patient is not to set up but remain lying down, preferably on her side or stomach. These patients are usually kept in bed about two weeks and then wear tampons about a month after they are allowed up and then for a week after each menstrual period for three or four months, and if necessary, keep them in bed during menstrual period. This with proper care as to the hygienic condition of the patient, will usually cure the acute cases. Retro-displacements complicated with tumors, adhesions, etc., are operated upon. Cases that require the use of a pessary in order to retain the parts in position are operated on rather than using pessary.

This treatment where operative measures are declined in chronic cases is a means of giving at least temporary relief from symp-

toms, and if the woman should become pregnant in the meantime, and if proper care is taken at child-birth, she may be relieved. This procedure is also recommended to be used prior to operative procedures.

Southern Practitioner, August, 1905.

Perinephritic Abscess.—By Dr. W. A. Bryan, Nashville.

New Orleans Medical and Surgical Journal, August, 1905.

The Barber Shop in Society.—By Dr. Isadore Dyer, New Orleans.

The Texas Medical News, August, 1905.

The Mosquito as an Etiological Factor in Disease.—By Dr, D. Monroe Cameron, Texas.

Book Notices.

Human Physiology. Prepared with Special Reference to Students of Medicine. By Joseph H. Raymond, A.M., M.D., Professor of Physiology and Hygiene, Long Island College Hospital, New York City. Third edition, thoroughly revised. Octavo volume of 687 pages, containing 444 illustrations, some in colors, and four full-page lithographic plates. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $3.50, net.

It is evident that in revising his excellent work for the new third edition, Dr. Raymond spared no labor to bring it up to present-day knowledge. Every page shows evidence of his careful revision, and in that portion devoted to the physiology of nutrition the author has profitably availed himself of Chittenden's valuable contributions to the subject. Besides more fully elaborating many topics previously discussed in the old edition, the author has introduced a number of new subjects, among which are the Influences of Alcoholic Fluids on the Excretion of Uric Acid, Hemolysis and Bacteriolysis and Ovarian and Abdominal Pregnancy. Dr. Raymond seems in some way to know just what features to illustrate and just what kind of illustrations to use, for every one of the 444 figures is practical and illustrates a point which might not be clear to the student. It would be difficult to find another volume of the same size containing so much up to date and accurate information.

Diseases of the Kidney, Diseases of the Spleen, and Hemorrhagic Diseases. By Drs. H. Senator and M. Litten, of Berlin. Edited with additions, by James B. Herrick, M. D., Professor of Medicine in Rush Medical College, Chicago. Octavo of 816 pages, illustrated. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $5.00 net; Half Morocco, $6.00 net.

With the appearance of this, the eleventh volume of Saunders' American edition of Nothnagel's Practice, the work nears completion, the final volume on the Heart being now in active preparation. Like the others, this volume can be taken as the acme of knowledge on the subjects embraced. Professor Senator's clear style, systematic arrangement of facts, and logical reasoning make his articles on the Kidney indispensible to the practitioner. The editor, Dr. Herrick, has enlarged on certain points whenever necessary, especially regarding treatment, diagnosis, urinary analysis, etc., so as to increase the value of the work to the general practitioner. He has also added articles on Cryoscopy and Phloridzin Glycosuria.

The sections on the Spleen and the Hemorrhagic Diseases were written by Professor Litten, whose pioneer work in these fields is widely known. The articles on the Mosquito and its relation to Malaria, on Splenic Anemia, on Congenital Icterus with Splenomegaly, and on the X-rays in the treatment of Leukemia have been brought down to date by the editor. Indeed, the editor's interpolations add greatly to the practical value of the volume, and we are sure such an authoritative work on these subjects has never before been published.

Jackson on the Skin. A Ready Reference Hand-book on Diseases of the Skin. By George Thomas Jackson, M. D., Chief of Clinic and Instructor in Dermatology, College of Physicians and Surgeons (Columbia University), New York. Fifth edition, enlarged and thoroughly revised. In one 12mo volume of 676 pages, with 91 engravings and 3 colored plates. Cloth, $2.75, net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1905.

The great value of this volume lies in the clearness of its symptomatology and diagnosis, and the excellent judgment used in its therapeutic recommendations.

The clear diction and the very convenient alphabetical arrangement renders the work not only an exceedingly quick reference book for the busy physician, but adapts it especially to the needs of students. The demand for five large editions is ample evidence of the popularity of the book. Each edition presents a thorough revision of the subject, so that the work may always be consulted for the condition of the science of Dermatology as it really exists. The present revision has been particularly searching, and the subject matter has been brought well up to date. The Appendix,

containing formulæ for Baths, Lotions, Ointments, Powders, etc., and prescriptions for internal treatment, is alone worth the price of the book.

As heretofore, symptomatology, diagnosis and treatment are specially considered. Many new sections have been added, resulting in a considerable enlargement of the work, and the volume is issued in full confidence that it will prove even more than ever before valuable to practitioners, students and teachers.

Hall's Physiology. A Text-Book of Physiology, Normal and Pathological. For Students and Practitioners of Medicine. By Winfield S. Hall, Ph.D., M. D., (Leipzig), Professor of Physiology, Northwestern University Medical School, Chicago; Member of the American Physiological Society; Member of American Association for the Advancement of Science, etc. New (2d) edition, revised and enlarged. In one octavo volume of 795 pages, with 339 engravings and three full-page colored plates. Cloth, $4.00 net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1905.

It is rare that an author gives evidence of being the most critical student of his own book. Dr. Hall has exhibited this power of detachment and has put himself in the place of his various classes of readers, namely, teachers, students, and last, but by no means least, physicians. Accordingly he has greatly simplified his whole presentation of the subject, while of course revising it to date. A new departure which should appeal to the physician (and equally also to the teacher and student) is the increased attention given to the applications of Physiology to clinical medicine. The volume is now one which the student will carry into practice, and also one which the physician will buy when he wishes to post himself on the physiology of disease as well as of health. To quote from the preface:—

"The most notable additions to the work are the sub-chapters on Pathologic Physiology. It is becoming apparent to medical educators that to master normal physiology alone without applying its laws to the symptomatology of disease is to miss a large part of the service which physiology should render, just as the mastery of structural or morphologic pathology without an understanding of the modification which structural changes induce in the functions, implies the loss of a large part of the advantage which the study of pathology should give to the student and practitioner of medicine. The author has attempted to cover this most important field."

The revision and improvements have required an increase of one hundred and thirty pages, but the previous very moderate price, four dollars, has been maintained. The work is handsomely illustrated.

Taylor on Sexual Disorders. A Practical Treatise on Sexual Disorders in the Male and Female. By Robert W. Taylor, A. M., M.D., Clinical Professor of Genito-Urinary and Venereal Diseases in the College of Physicians and Surgeons (Columbia University), New York. New (3d) edition, enlarged and thoroughly revised. In one octavo volume of 575 pages with 130 engravings and 16 colored plates. Cloth, $3.00, net. Lea Brothers & Co., Philadelphia and New York, 1905.

The demand for three large editions of Dr. Taylor's excellent work in less than five years indicates the position of authority in its field which it has won. The volume covers the sexual disorders of both sexes fully in all their bearings. In this edition the chapter on the Anatomy and Physiology of the sexual apparatus has been very much amplified and many new illustrations have been added. Throughout the work diseases of this nature have been treated in careful detail, many typical cases being given, thus facilitating diagnosis and rendering most practical aid in questions of treatment both medical and surgical. The text has been thoroughly revised to date, and the sections which treat of the sexual disorders in women have been greatly enlarged. Four completely new chapters have been added and a number of new illustrations, mostly original, will, it is believed, render this valuable work still more useful to the specialist and general practitioner. Dr. Taylor's work is practically the only one in English in its exact field, and its great practical worth is clearly reflected in the demand which affords such frequent opportunities for revision.

Green's Pathology. Tenth edition. A Textbook of Pathology and Pathological Anatomy. By T. Henry Green, M.D., F.R. C.P., Consulting Physician to Charing Cross Hospital, London. New (10th) edition. Thoroughly revised by W. Cecil Bosanquet, A. M., M. D., F. R. C. P., Assistant Physician to Charing Cross Hospital. Octavo, 606 pages, 348 engravings and a colored plate. Cloth, $2.75 net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1905.

The vigor and vitality of Green's Pathology are excellent evidences of qualities which have won the favor of students, professors and practitioners alike. A text-book which has reached its tenth edition stands in no need of an introduction. This work has been from its first edition a simple,

clear and adequate presentation of pathology and pathological anatomy—the foundation of all medicine. The subject of the work has undergone many changes since Green was first issued. Pathology is by no means stagnant. In fact, it is doubtful whether any branch of medicine has undergone so rapid and so transforming a growth during recent years. The demand for Green has made necessary very frequent editions. Each edition represents a thorough revision, but none, perhaps, so thoroughgoing as the present. The pages of this work have, therefore, always been consulted for the recent advances and condition of its science, and the diction of the work is so clear, so directly to the point, so easy of understanding, that the popularity of Green throughout the student world, and equally as a quick reference for the busy practitioner, is not to be wondered at.

The Pharmacopœia of the United States of America. Eighth Decennial Revision by Authority of the United States Pharmacopœial Convention held at Washington, A.D. 1900. Revised by the Committee of Revision and Published by the Board of Trustees. Official from September 1, 1905. Philadelphia agents, P. Blakiston's Son & Co. Sub agents: New York, E. R. Pelton, 19 E. Sixteenth St.; Chicago, The E. H. Colgrove Co., 65 Randolph St.; St. Louis, C. V. Mosby, 2313 Washington Ave.; San Francisco, Payot, Upham & Co., 100 Battery Street.

The Pharmacopœia shows that the committee on revision have been active, as many changes are to be noted in its contents. There are many changes in the names of well known substances, and words which have been incorporated into popular language have sometimes been dropped, as in the case of carbolic acid (phenol). The future of the Pharmacopœia seems now to be in good hands, and every provision made for its careful and systematic revision at periodical intervals. The present volume is a very creditable example of the committee's work.

The Surgical Assistant, a Manual for Students, Practitioners, Hospital Internes and Nurses. By Walter M. Brickner, B.S., M.D., Assistant Surgeon, Mt. Sinai Hospital, Out-Patient Department, etc. 360 pages. 123 original illustrations and 116 illustrations of surgical instruments. New, $2.00, net. International Journal of Surgery.

The twenty-five chapters that make up the text of this manual are filled with concise directions and helpful points for the surgical assistant and for the nurse. The subject is considered chiefly from the special and operative standpoint. A careful reading of the related paragraphs preliminary to an operation should be of great service to the assistant and indirectly to the surgeon assisted. The appendix contains much useful reference matter in connection with surgical materials and medicines. The book is fully illustrated and handsomely printed and bound. As the only work of its kind on the market, it should meet with a warm reception.

Handbook of Anatomy. Being a Complete Compend of Anatomy, Including the Anatomy of the Viscera and Numerous Tables. By James K. Young, M. D., Professor of Orthopædic Surgery, Philadelphia Polyclinic, Clinical Professor of Orthopædic Surgery, Woman's Medical College of Pennsylvania; Instructor in Orthopædic Surgery, University of Pennsylvania; Fellow of the College of Physicians of the College of Physicians of Philadelphia; Fellow of the Philadelphia Academy of Surgery; Fellow of the American Orthopædic Association; Member of the American Medical Association, etc. Second edition, revised and enlarged. With 171 engravings, some in colors. Crown octavo, 404 pages, extra flexible cloth, rounded corners, $1.50 net. F. A. Davis Company, Publishers, 1914–16 Cherry St., Philadelphia.

This book is a synopsis of human anatomy for the use of students of medicine. Conciseness and accuracy have been the points which the author has especially kept in mind in preparing this work. In its preparation the last edition of Gray and Morris have been freely consulted, so that it can be used with either of these works.

Practical Massage in Twenty Lessons. By Hartvig Nissen, Instructor and Lecturer in Massage and Gymnastics at Harvard University Summer School; Director of Physical Training, Brookline Public Schools; Former Acting Director of Physical Training, Boston Public Schools; Former Instructor of Physical Training at Johns Hopkins University and Wellesley College; Former Director of the Swedish Health Institute, Washington, D. C., etc.; Author of "Swedish Movement and Massage Treatment," "A. B. C. of Sweden Educational Gymnastics," "Rational Home Gymnastics," etc. With 46 Original Illustrations. Philadelphia: F. A. Davis Company, Publishers, 1905. Price, Extra Cloth, $1.00.

This book will be found worthy of its title. It is the result of the author's life work. It has been written just as he has

been teaching for several years at Harvard University. He records here a combination of methods, which he has found to be the best and most useful, many of them are original. Any one interested in this subject cannot do better than read this book.

The Elements of Homoepathic Theory, Materia Medica, Practice and Pharmacy. Compiled and Arranged from Homoepathic Text-Books. By F. A. Boericke and E. P. Anshutz. Philadelphia: Boericke & Tafel. 1905. Price, Cloth, $1.00.

This book has been compiled from a wide field of homoepathic literature, and it seems to us that there is a demand for such a work. A book of this size is sure to be in demand, giving as it does in a small space an idea of homoeopathy, its medicines, dosage, practice, etc. No book that we have seen covers all these points, hence this compilation. The little book claims no originality, it is just a condensation of established principles and facts.

Manual of the Diseases of the Eye for Students and General Practitioners. By Charles H. May, M. D., Chief of Clinic and Instructor in Ophthalmology, College of Physicians and Surgeons, Medical Department of Columbia University, New York, 1890–1903; Ophthalmic Surgeon to the City Hospitals, Randall's Island, New York; Consulting Ophthalmologist to the French Hospital and to the Red Cross Hospital, New York; Adjunct Ophthalmic Surgeon to Mt. Sinai Hospital, New York, etc. Fourth Edition Revised. With 360 Original Illustration including 21 plates, with 60 colored figures. New York: William Wood & Company, 1905. Price, $2.00.

The third edition of this manual appeared in August, 1903, and has been reprinted twice. The author deserves to be congratulated on the favor with which his work has been received in this the fourth edition. Every page has been carefully examined and a considerable number of alterations have been made. Many illustrations have been replaced by superior ones. New figures have been added, including eight additional colored plates: among the latter are six presenting twenty-nine colored drawings of external diseases of the eye. The volume has been kept up to date but has not been increased in size, the original plan for presenting a book for the student and general practitioner has been adhered to.

The book contains about four hundred pages, and any one interested in this branch of medicine cannot, as we believe, afford to be without this most magnificent book.

Color-Vision and Color-Blindness. A Practical Manual for Railroad Surgeons. By J. Ellis Jennings, M. D., (Univ. Penn.) Formerly Clinical Assistant Royal London Ophthalmic Hospital; Professor of Diseases of the Eye, Medical Department Barnes University, St. Louis; Ophthalmic Surgeon to the Centenary Hospital; Ophthalmic and Aural Surgeon to the St. Louis and San Francisco Railway System, etc. Second Edition, Thoroughly Revised. With Illustrations. Philadelphia: F. A. Davis Company, Publishers, 1905. Price, Extra Cloth, $1.00.

This book deals with a very interesting subject, one that has never been discussed so thoroughly before as it is in this book. For a long time the theoretical problem of color-blindness has engaged the attention of the scientific world. The practical side lay dormant for many years until it was proved that this curious defect was the cause of disastrous accidents by rail and sea. Public attention became aroused, new and simpler methods of investigation were invented, and as a result of much agitation, many railroad and steamship companies now require their employes to submit to an examination as to their color-sense. The methods now employed have proved practical and efficient and there is every reason to believe that all the railroads in this country would take measures to weed out the color-blind from the service if the frequency and dangers of this affection were brought to their notice. It is with the hope of stimulating further effort in this direction that this manual has been written.

The author does not mean to be original, but he has produced a practical work on color-blindness which contains all the essentials of a perfect understanding of the subject.

The book contains 132 pages and is neatly gotten up.

Therapeutics: Its Principles and Practice. By Horatio C. Wood, M.D., LL.D., (Lafayette, Yale, Pennsylvania), Professor of Materia Medica and Therapeutics in the University of Pennsylvania; Member of the National Academy of Science. Twelfth Edition. Thoroughly Revised and Adapted to the Eighth (1905) Edition of the United States Pharmacopœia by Horatio C. Wood and Horatio C. Wood, Jr., M. D., Demonstrator of Pharmacodynamics in the University of Pennsylvania. Philadelphia and London: J. B. Lippincott Company, 1905.

If it had not been for the approaching revision of the United States Pharmacopœia, the twelfth edition of this most magnificent work would have appeared several months sooner.

The fact that this book has been published twelve times in twelve different editions is a sufficient recommendation, really the work is already well known, not only among the English speaking people but in other languages. The changes in this edition far exceed those in any other previous edition. Besides the changes necessary to make the work conform closely to the new Pharmacopœia, there are a large number of other important alterations. The chapters on Expectorants and on Disinfectants have been completely rewritten, and a new systematic classification of these drugs adopted. A detailed consideration of local anaesthesia, including the so-called spinal and neural anaesthesias, has been added. Hyoscine has been considered with the Delirifacients, camphor has been placed among the cardiac stimulants, and carbolic acid with the Disinfectants. The articles on these drugs, and also those on morphine derivatives, alcohol, methylene-blue, xanthin bases, and the antitoxins, are practically new. Over seventy new drugs have been added to those formerly discussed, among which may be mentioned; agurin, airol, anaesthesin, argyrol, apocynum, bismuth subiodide, bismutose, collargol, creosotal, erythrol tetranitrate, gelatin, geosote helmitol, hedonal, hydrofluoric acid, hetol, isarol, isopral, kaolin, lecithin, lysol, nirvanin, orexine, oxycamphor, pyrosal, quinic acid, scopola, sidonal, salipyrin, thiosinamine, theocine, tachiol, theocol, urasol, urotropin, and veronal.

This treatise is intended to be used by the student as a text-book, and by the practitioner as a work of reference. To meet the difficulties inherent to this duplex function a typographical arrangement has been made by which the essential features of any article will catch the eye of the student at once, whilst the subordinate matters are fully discussed in finer print. Again, these drugs which are of very little importance are not recognized by the United States Pharmacopœia, or are in any way of such novelty and character that they do not concern the student of medicine, are discussed in small type. The revision of the book is believed to have been thorough, and with the addition of the numerous new remedies it is hoped that as a work of reference it will be found distinctly more satisfactory than in its former editions.

The book contains 907 pages and is beautifully bound. Price of which is about $5.00.

Dietetics for Nurses. By Julius Friedenwald, M. D., Clinical Professor of Diseases of the Stomach in the College of Physicians and Surgeons, Baltimore; and John Ruhrah, M.D., Clinical Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. 12mo volume of 363 pages. Philadelphia and London; W. B. Saunders & Co., 1905. Cloth, $1.50 net,

"Dietetics for Nurses" has been written on the same practical lines as the larger work on Diet by the same authors. It has been prepared both to meet the needs of the training school and serve as a ready reference book for the nurse when on a case. The essentials of dietetics are given in a concise, clear manner, and the physiology of digestion with the various classes of foods and the part they play in nutrition have been carefully reviewed. The subject of infant feeding and the feeding of the sick have been fully discussed, and a brief outline has been given of the principles involved in the nourishment of patients suffering from the various diseases in which diet plays an important role in treatment. A very useful feature consists in the extensive diet lists, with instructions, enabling the nurse to comprehend and intelligently to carry out the orders of the physician. Another commendable feature is the large number of recipes for the invalid's dietary. Altogether, it is an excellent little work indispensable to the well-trained nurse.

The Treatment of Fractures; with Notes on a few Common Dislocations. By Charles L. Scudder, M. D., Surgeon to the Massachusetts General Hospital. Fifth Edition, Revised and Enlarged. Octavo of 563 pages, with 739 original illustrations. Philadelphia and London; W. B. Saunders & Company, 1905. Polished Buckram, $5.00 net; Half Morocco, $6.00 net.

Every year for the past five years it has been our pleasure and profit to review a new edition of this excellent work by Dr. Scudder. It is, indeed, a most remarkable book, and the author and publishers are to be congratulated upon its publication. In this, the fifth edition, Dr. Scudder has added some fifty new illustrations, many of them X-ray plates, illustrating the actual line of fracture. The text also has been very carefully revised, and new matter added throughout. Important changes have been made in the treatment of fractures of the neck of the femur, bringing this part of the book in accord with the latest advances. The 739 illustrations do what they should—they illustrate, showing the reader just what is intended. Undoubtedly this feature has aided greatly in the success of Dr. Scudder's work.

Literary Notices.

THE NATIONAL STANDARD DISPENSATORY was ready for sale September 1st,

when the new U. S. Pharmacopœia went into effect. By authority of the convention it will contain every article in the new U. S. P., as well as the explanations and instructions necessary to understand and apply the brief statements to which the official guide is restricted.

The National Standard Dispensatory is a new work, a distinct improvement upon any thing of the kind hitherto published. Its authors, Dr. H. A. Hare, of Philadelphia; Prof. Charles Caspari, Jr., of Baltimore; and Prof. H. H. Rusby, of New York, are all men of the highest eminence in their respective fields, and are all members of the Revision Committee of the U. S. P. They have carefully matured its plan so as to render the maximum service to both professions it interests, namely, Pharmacy and Medicine. It not only covers the new U. S. P. as aforesaid (and the chief foreign pharmacopœias as well), but the scarcely less important domain of the unofficial drugs and preparations so largely used. It offers full information regarding the pharmacognosy, the pharmacy, and the medical action and uses of all substances used in Pharmacy and Medicine at the present day. Pharmaceutical methods and products are covered, with descriptions of the most approved apparatus and tests.

Dr. Hare has again justified his reputation for knowing what is wanted by giving a compact and direct presentation of modern therapeutics in the section dealing with that subject in the case of each drug. The Appendix contains useful tables, formulas, etc., for practical work. There are two Indexes, the General, covering all the names in the text, and so affording a guide to the drugs of the entire globe, and Therapeutic index, where, under each disease, are given all the drugs used in its treatment, with reference to the page where the conditions indicating a choice are found.

This work of the maximum utility is alone in the field.

Abstracts of the Leading Articles of the Month.

Reversal of the Patella.

Pringle, in the Scottish Medical Journal describes a case of reversal of the patella, occurring, with other serious injuries to the knee joint, as a result of a fall from a building which necessitated the amputation of the leg above the knee joint. The patella was found lying on the outer margin of the external condyle, pivoting on the outer lip of the trochlea, inclined slightly outward, and it was impossible to bring it back to its position until an incision was made into the aponeurosis, when the cartilage-covered surface of the patella presented, looking forward, and with an elevator, the hip flexed, and after much trouble the bone slipped into place. When the knee joint was dissected it was found that the attachment of the vastus externus had been completely torn from the patella, as well as a part of the rectus and its fibrous expansion. The upper margin had been fractured off, and lay loose in the joint. The patella had been rotated so that the internal border had passed backwards. The writer has found only seven published cases of reversal of the patella. In most of these the bone was easily replaced by the use of the thumb and fingers. There are two varieties—those from within outward, where the external margin of the patella passes backwards, the internal going to the front, and those from without inwards, when the external margin passes in front and to the inner side. The last is the rarest, and the recorded case is of this type. It has been found very difficult to produce this type of dislocation artificially, and Streubel gives it as his opinion that it cannot be produced unless there has been rupture of the capsule of the joint and the extensor expansions. Meyer argues that reversal of the patella is the result of two forces, both of which are tangents to the circle of rotation, brought to play on the margins of the patella; the second force is the resistance of the sloping surfaces of the condyles, when the knee is flexed. He has experimented with elastic webbing and a rigid band forming an artificial ligamentum patellæ, and finds that the patella is twisted to a varying degree, and may lie in several positions.

Sarcoma of the Orbit. Report of a Case Cured by the X-Rays.

Webster Fox (Knapp's Archives) records this case. The growth was a large one, with proptosis, enlargement of the left naso-orbital region, and it had produced tetanoid convulsions, attributed to irritation of the cerebral cortex. Exploratory operation revealed involvement of the ethmoidal cells, and microscopic examination of a portion of the growth showed it to be a spindle-celled sarcoma. Consultation with his surgical colleagues resulted in the case being decided as inoperable. As a last resort, Fox determined to try X-ray treatment, and after seven months of this all signs of the growth had entirely disappeared. The paper is illustrated with three photographs. The first shows the hideous appearance before treatment; the second after three months' treatment; third, the absolutely normal appearance as a final reesult. He remarks that, "while this single case does not prove that X-ray treatment is capable of curing all such cases, it does show a pos-

sibility of bringing about a favorable result, the importance of which must not be ignored."

Kienbock also (Wochenschrift fur Therapic und Hyg. des Auges), demonstrated a case of sarcoma cured by the X-rays, before the Medical Society in Vienna. The growth which was an endothelial sarcoma, had appeared first in the nose seven years before, and in spite of repeated operations had invaded both orbits and produced exophthalmos on both sides, with atrophy of the nerves. Pain ceased after the first treatment, and in three months the tumour entirely disappeared, the eyes resumed their normal positions, and vision partly returned. Docent Dr. Grossman also showed a similar case where the growth had almost entirely disappeared under the X-rays. Dr. Holzknecht called attention to the difference between sarcoma and carcinoma in their relation to the X-rays. It is known that the action of the rays becomes less effective below the surface, apparently because the greater portion is absorbed by the superficial layers. Cells of pathological tissue are much more sensitive to the rays than those of normal tissue. Carcinoma cells are only destroyed on the surface, while the deep infiltrating carcinomata of the skin are very little, and the carcinomata of internal organs are not at all affected by X-ray treatment. Sarcomata, however, even of deep-seated organs, e. g., the ovaries, react in a surprising manner to the rays. Sarcoma tissue is not alone in this respect; it shares the peculiarity of enormous sensitiveness with that of mycosis fungoides and of tumors of the lymphatic apparatus in pseudoleukæmia. The action of the rays, therefore, depends not only on their penetrating power and the absorbing power of the tissue treated, but also on its sensitiveness.

The Uses of Roentgen Rays in Medical Practice.

Innelman (British Medical Journal) says that one of the most important uses of Roentgen rays in medicine is in the controlling of the effects of accidents, in cases when claims for compensation are made. The author says that it is necessary to prepare a skiagraph in every such case, but inasmuch as badly procured pictures lead to confusion, the photograph should be carried out by a skilled Roentgographist. The writer gives some examples of wrong deductions having been made from faulty pictures. It is also necessary that the person controlling such casees be acquainted with all possible abnormalities of the skeleton. As an example, he cites a case in which the existence of a so-called "os intermedium cruris" gave the impression that a fracture was present. Sesamoid bones must also be recognized as such. The existence of splinters of metal damaging bones can be recognized, but one must at the same time be careful to determine whether there is any independent disease of the bone which has nothing to do with the accident. Sarcoma, syphilis, and tuberculosis may affect a bone which becomes injured. He points out that one must consider if the functional damage is in proportion to the supposed cause. Again, it requires a very careful judge to determine whether a healed fracture has left any avoidable laming behind. It is extremely rare to come across an ideal union of a fracture when seen in Roentgograph.

In medical jurisprudence also the uses of x-rays are of importance. As instances, he speaks of a case in which, although the accused stated that he only fired one shot, five bullets were found in the skull, and in another case a small portion of the blade of a knife was seen in the interior of the skull, proving that the stabbing had been carried out with a knife. Another very important point in jurisprudence can be cleared up by means of the rays. In judging whether an infant has died during or after birth, or whether it was capable of existing (in fetal life) apart from the mother, an x-ray photograph will be able to settle at once whether the fetus has passed the thirtieth week, after which it is believed to be capable of independent life by attention to the skeleton. The ossification center in the distal end of the femur first appears at this time, and can readily be detected by these means. The lungs of an infant which has not breathed show a shadow, while those of an infant which has breathed do not do so. If the lungs have been artificially blown up, one sees transparent portions near the main bronchi. For the military surgeons and for the medical referee of a life insurance company, x-rays too are of great importance. Besides changes in the skeleton, the rays are able to demonstrate earlier than other methods of examination the existence of disease of the lungs and aneurism of the aorta. The chief point emphasized is that examination must be entrusted to one well practiced in skiagraphy.

Ethyl Chloride--A Word of Warning.

In an editorial in the British Journal of Children's Diseases, the writer says that at a recent meeting of the Society of Anesthetists several fatalities were reported during the administration of ethyl chloride. Last June this journal published a paper read by Mr. Chaldecott before the Society for the Study of Diseases in Children on the use of ethyl chloride as a general anesthetic, in which, after attention had been drawn to the many advantages of the drug, and to the

cases for which it was most suitable, it was very clearly laid down that the agent in question is a very powerful anesthetic and should only, except under circumstances of extreme urgency, be administered to patients who have been properly prepared. Since that time, however, ethyl chloride has attained a very wide-spread popularity, and owing doubtless to the ease with which complete anesthesia may be induced by its use, there is considerable risk of its being employed in a haphazard fashion and in unsuitable cases. It is not suggested that any of the reported fatalities were due to either of these causes, but their occurrence certainly proves that its administration is not by any means free from danger to life.

As suggested at the meeting of the Society of Anesthetists, there are several precautions which should be observed: (1) the patient should be prepared as for chloroform or ether; (2) care should be taken not to present at first too large a dose; (3) a prop should always be inserted between the teeth; (4) the patient should be allowed to rest for some time after administration, as faintness occasionally supervenes, especially when a large dose has been given; (5) the drug should not be sprayed directly upon the mask close to the patient's face.

There can be no doubt that the introduction of chloride of ethyl as a general anesthetic is a very important innovation, especially valuable in the case of children, and it would be a matter for regret if the drug were to fall into disrepute through accident caused by disregarding such dangers as must inevitably attend the administration of so powerful and rapid an anesthetic agent.

Alcohol and Physical Deterioration.

Woodhead (British Medical Journal) says that in alcohol we have a most potent cause of physical degeneration, not because of its rapid action, but because of the changes which it produces in the system directly or indirectly. Its action upon the nervous system is more marked than is sometimes imagined. Further, it is now recognized that it acts not as a stimulant for anything beyond a very short time, but as a paralyzing agent. Even in comparatively small quantities it interferes with the functional activity of the nerve cells. These cells are the most highly developed in the body, and their full functional activity is essential for the carrying on of the highest vital processes in the body; therefore anything that strikes at these nerve cells, strikes at the very center of nutrition and vegetative existence. This being so, the man who takes too much alcohol is not able to give his best services to his family or to the nation.

The report of the Inter-Departmental Committee on the question of physical deterioration showed that England is in danger of the evil that faces France. When the man drinks, the deterioration is not so very marked; but as soon as the women begin to drink, two factors come into play; first a large number of infants are born with defective nervous systems, and, secondly, there is a great interference with the productiveness of the women. In France it has been found that coincident with the upward trend in the consumption of alcohol there has been an increase of suicides and cases of lunacy, and of the percentage of conscripts refused as unfit for service. This clearly proves the pernicious influence of this much-used beverage. In Sweden, on the other hand, where there has been a decrease in the consumption of alcohol, the exact opposite is the case.

A Lithopedion Forty-one Years in the Abdominal Cavity.

Haultain (Bri. Jour. of Obstet.) has only been able to find nine cases in the literature where the tumour has been present in the abdominal cavity over forty years. A tenth case is reported by the author with the following history: The patient, aged seventy-one years, became pregnant when thirty years of age, and when at full term went into labour without tangible result. The abdominal swelling remained, and for some time gradually diminished in size. In February, 1904, the patient died somewhat suddenly of cardiac disease. On post-mortem examination a large lithopedion, placed behind the uterus, and densely adherent to the intestines, was found. The fetus was disposed with the head downward, but no true relation could be determined. The patient was well aware of the presence of the fetus all her life, but aside from occasional attacks of abdominal pain she enjoyed good health and performed her duties until shortly before her death. Menstruation returned a few months after her spurious labour and continued to the age of forty-five years. There had been no subsequent pregnancies. The fetus had preserved to a remarkable degree, its normal configuration. Flexion still existed; the limbs to the finest digits were in absolute preservation, and the nails projected over the finger-tips. The tissues were contracted and calcarious over the limbs, but on the back scalp and breech, they seemed of normal thickness. There was no sac. In the majority of cases of advanced ectopic pregnancy decomposition results with subsequent disintegration and passage of the fetal membranes through the hollow viscera; and it is difficult to discover the reasons which in one case tend toward

calcification and in the other to disintegration. Prolonged retention of the fetus in a normal uterus with resalting lithopedion has not as yet been conclusively proven, but Pearson reports a case where one remained in a rudimentary horn of a double uterus for twenty-six years.

The Dietetics of Dilatation of the Stomach.

Hutchinson (The London Practitioner) says that when the dilatation is slight and of the atonic type, without true pyloric obstruction, the meals should be small, dry and mainly of animal constituents. The atonic stomach deals only with difficulty with a mixture of liquids and solids, consequently the patient must not drink with his meals. The necessary amount of liquid may be made up by taking sips of hot water between times. All saccharine articles should be avoided, and the starchy constituents restricted to rusks, torrefied toast, or pulled bread; thus the production of flatulence is reduced to a minimum.

Should there be actual obstruction at the pylorus, with stagnation of the contents, one must begin by cleansing the stomach by thorough lavage, which may be repeated daily, and the diet should consist largely of milk, peptonized if necessary, and administered frequently and in small amounts. The milk may sometimes be enriched by one of the concentrated proteid foods, and a limited quantity of starchy food in the form of biscuits or rusks may usually be allowed with safety.

Patients with pyloric obstruction and copious vomiting, or in whom lavage is being carried out, are very apt to suffer from a deficient supply of fluid to the tissues, and much of the cachexia and wasting, which they exhibit, is due to this cause. In such cases the supply of fluid should be supplemented by the administration of water by the bowel, a pint of normal saline being injected night and morning. If this be omitted, the secretion of waste products by the kidneys is apt to become interfered with and uræmic symptoms may supervene.

Digestive Auto-Intoxication.

Thomas (Rev. Mens. de Mal. de l'Enf.) says that from his studies of the subject and from a review of the literature, he concludes that at the present time it is not possible to define, precisely, the characteristic symptoms of this condition. The different systems of the body may be of etiologic importance, either singly or in combination. Thus an auto-intoxication may be produced in the course of functional or organic disturbances of the gastro-intestinal tract, in certain disturbances of the general nutrition, or in diseased conditions of the nervous system. The relative importance of these causative factors varies, but it appears settled that in a great number of these cases, the most important cause is some alteration in the functions of the nervous system. Unquestionably, modifications of the digestive ferments, and the consequences thereby ensuing, play an important role in the pathogenesis of the condition.

The chemical substances, ptomaines or others, produced in the course of intestinal auto-intoxication, are as yet imperfectly known. However, the importance of this factor doubtless stands in direct relation to the amount and degree of absorption taking place. And again, this varies greatly in different cases and individuals.

The presence in the urine of certain aromatic bodies (ethereal sulphates) in increased quantity, cannot be considered an absolutely pathognomonic sign of the existence of an auto-intoxication. Nevertheless, their presence in the urine may be taken as an important confirmatory diagnostic sign.

Intestinal auto-intoxication thus represents a complex syndrome of various phenomena, developing from a variety of causes. It is certain that in the pathogenesis we must consider the state of all of the organs of the digestive tract, not limiting ourselves to the condition of the intestines. It is not probable that the stomach per se is an important factor, though it is true that insufficient elaboration of the food stuffs in this viscus would have an affect upon the rest of the digestive apparatus.

The liver is, however, a factor of the greatest importance. Insufficiency of the hepatic function, either congenital or acquired, will be found to exist in the majority of these cases.

When the multiplicity and complexity of this function are considered, this is easily understood.

The small intestine also plays a role of importance. The study of the intestinal ferments is just beginning, and their importance to the body economy is being more and more clearly recognized. Particular weight is to be attached to the persistence of the normal integrity of the intestinal mucosa. If this be broken from any cause, the intestinal secretions are apt to be abnormal, both quantitatively and qualitatively. As a consequence, the modification which the food stuffs should undergo in the intestine will be incomplete, and, in turn, the noxious action of the bacterial content of the large bowel will be greatly enhanced.

Therefore it is that Senator could say: "Intoxication cannot take place unless the toxic products exist in very large quantity, or the mucosa is abnormal, or the other or-

gans of defense are below par."

It would, therefore, appear that the role of the large intestine in the production of this conduction had been somewhat exaggerated. In the colon, resorption is the principal factor, and here again, the condition of the mucosa is all important. Leaving out of consideration the cases where there is a gross pathological lesion, and where intoxication is, therefore, purely secondary, we find that in cases of primary intoxication it is the nervous system, which, by controlling the condition of the mucosa, actually determines the possibility of attack in cases where the necessary antecedent conditions, as outlined above, are found.

The Reflexes in Hysteria.

Broca (British Medical Journal) from a study of 100 cases of hysteria chosen from among the more typical draws the following conclusions: (1) Abolition of the pharyngeal reflex is frequent especially in the forms accompanied by anesthesia, less often in hysterical fits, still less in paralyses and contractures. This sign is found in many other affections, and even normally, and is therefore of little diagnostic value in hysteria. (2) Exaggeration of the tendon reflexes is more frequent than abolition of the pharyngeal reflex, and is a sign at least as important as the latter. It is very frequent in hysterical seizures, less constant in paralyses and contractures, still less in anesthetic cases. It is, however, found in many toxic conditions, and even normally, and so has no pathognomonic value. (3) Abolition of plantar sensibility is frequent in hysteria, especially in the forms with anesthesia, then in paralyses, and lastly in convulsions. (4) Simultaneous abolition of cortical plantar reflex or flexor type, and of medullary or fascia lata type, is very frequent, most in anesthetic cases, a little less often in paralyses, contractures, and convulsions. This sign the author terms the phenomena plantaire combine. These two reflexes are remarkably constant in the normal state; their abolition has considerable importance in the diagnosis of hysteria, of which it may be regarded as a special sign. (5) Plantar anesthesia is not necessarily present with combined plantar phenomenon; it may co-exist, but the latter may be present without alteration of sensation. (6) The deep plantar reflex is often exaggerated in hysteria, but it may be normal, feeble, or abolished. (7) The abdominal reflex shows inconstant variations; most often it is normal, but may be abolished, exaggerated, or feeble. (8) Ankle clonus is not very rare, patellar clonus is less frequent, and wrist clonus he has not seen in these cases. Ankle clonus is especially frequent in the paralytic forms, less common in the others. Patellar clonus is also most frequent in the paralyses and contractures, very rare in convulsions, and never seen in anesthesias. (9) He has never seen true Babinski's reflex in typical cases, but in eight cases there was le signe de l'eventail; the latter sign, therefore, has not the same clinical importance as the extensor reflex.

Treatment of Cardiac Dilatation.

Fleming (Scottish Med. and Surgical Journal) mentions the use of massage, followed by resistance movements and ultimately by graduated exercise as a helpful adjunct to the principles of treatment of very difficult cases of cardiac dilatation. The writer cites the case of a woman, aged 47, whose heart, on examination, was found to be greatly dilated; at the level of the fourth rib the cardiac dulness extended $2\frac{1}{4}$ inches to the right of the mid-sternal line, and seven inches to the left of this line. The apex beat, which to the author's knowledge had a few months before been situated under the sixth rib, was now under the seventh rib, and in the anterior axillary line. The pulse intermitted every three or four beats, and was very irregular in force, There were systolic murmurs in the mitral and tricuspid areas, and signs of oedema at the pulmonary bases. The ankles also were œdematous.

Her condition was improved by long rest in bed and the administration of strophanthus, but on two occasions she suffered a relapse after attempting to lift a box. She was in bed for six months following the second relapse. For eleven months no improvement in her condition was made. The slightest movement was sufficient to bring on symptoms of heart failure. At this point massage was commenced and carried on for ten days; on the eleventh day resisted movements were cautiously attempted and carried on daily for a second period of ten days; on the twenty-first day the patient was allowed to get up for half an hour, and a five-minute period of gentle walking was substituted for the resisted exercises. Under this treatment she slowly but steadily improved; the pulse became more regular and slower in rate, and she ate and slept much better; the heart returned to its normal size and the persistent cough disappeared. Eight months later compensation was sufficiently established to admit of the patient's being up all day, of her taking moderate exercise, and doing light forms of work such as sewing.

The Causes of Appendicitis.

Bottomley, in the London Practitioner, treats of the etiology under three heads: (1) The variety of micro-organisms found

in the disease; (2) why this part of the bowel is more liable to inflammation than other parts, and (3) the individual predisposing conditions. Under the first class the organism most frequently found to be present is the Bacillus coli communis. The streptococcus is a frequent cause. The following organisms have also, though less often, been found: The staphylococcus pyogenes aureus and staphylococcus citreus, pneumococcus, the Bacillus pyocyaneus, proteus and various anerobic and putrefactive bacilli, as have also the bacilli of influenza, diphtheria, glanders and tetanus. Actinomycosis is a rare cause. Tuberculous and typhoid ulcers may occur in the appendix. The conditions which make the appendix more liable to attack by microorganisms than the rest of the bowel are: (1) Its great amount of lymphoid tissue; (2) the bacterial activity is at its maximum in the cecum; (3) its previous diseased condition; (4) gross lesions which are contributing causes, as concretions, ulcers, narrowing of the lumen at one point, true foreign bodies; (5) the appendix may be kinked, bent at an angle or twisted around its long axis, it may have a very short mesentery. Under the individual predisposing conditions may be mentioned: (1) Constipation; (2) the use of purgatives; (3) indigestion; (4) bad teeth, and (5) the uric acid diathesis.

Abdominal Pain in Children.

Carriere (British Journal of Children's Diseases) calls attention to the pains at times due to dermic hyperesthesia, to typhoid fever, and which appear in neurotic girls at puberty. In small boys under a course of gymnastics rheumatism of the muscular parietes may be the cause of the pain. There is constant pyrexia, the integuments are not painful, but pinching the parietes produces extreme pain, as also does the slightest movement. Abdominolumbar neuralgia is not rare in children; painful spots, lumbar, ilioinguinal, sacral, and suprapubic, established the diagnosis. In pneumonic children a stitch in the abdomen often occurs, suggestive of appendicitis or perforation. When minute abdominal examination fails to discover anything, the possibility of latent Pott's disease should be borne in mind and the spine percussed. In addition to pains from peritonitis, hepatic congestion, hepatic colic, movable kidney, renal colic, and nephritis, ovarian pain is often met with in girls. Primary or secondary tuberculosis of the mesenteric glands causes cantinuous or paroxysmal pain. In convalescents from diphtheria violent abdominal pains occur, which Luss attributes to vague lesions, and claims to be premonitory of cardiac paralysis, and of fatal import. Mercurial entaralgia and lead colic also occur. Enteralgia frequently appears in anemic constipated boys and girls. This usually takes the form of dry colic without relation to ingestion of food or to digestion. The feces should be examined for irritant material. Intestinal worms produce pains which are not severe, but are worse when the subject is fasting, hot drinks always giving relief. The pains due to toxemia are increased by ingestion of acid, salt, aromatic or alliaceous substances, and quieted by oil, sugar. or milk.

The Influence of Smallpox on Vaccination.

Hilbert, in the London Lancet, says that the prevalent opinion is that successful vaccination or revaccination of a patient suffering from a suspicious rash tells very strongly against that rash being one of smallpox. In twenty cases of variola vaccinated or revaccinated after the appearance of the eruption, eleven vaccinations or revaccinations were successful. No second attempt at vaccination or revaccination was made in the unsuccessful cases. In the greater proportion of the successful cases well marked typical vaccine vesicles appeared at the site of vaccination or revaccination. These vesicles became evident from the fourth to the sixth day after vaccination and ran the usual course. In some cases there was merely an indurated raised papule instead of the typical vesicle. In two cases of semiconfluent smalipox, one of which was revaccinated on the first day and the other vaccinated on the third day of the smallpox rash, the vaccine vesicles were extremely well marked. Of the eleven successful cases, ten were vaccinated or revaccinated during the first four days of the smallpox eruption. The eleventh case was not revaccinated until the fourteenth day of the smallpox eruption. Four raised indurated papules at the site of the operation gave evidence of successful revaccination. Neither vaccination or revaccination done after the smallpox eruption had any modifying influence on the rash or on the course of the disease.

Nature of Diabetes Insipidus.

Meyer (Deutsch Arch. f. klin. Med.) in an article throws a good deal of light upon the nature of this obscure disease. It was found quite constantly that if patients secreting 10,000 or more c.c. of urine are put on a certain diet the amount of urine will often fall as low as 3,000 c.c. without giving rise to disagreeable symptoms. This diet consists solely of carbohydrates and fats, some fruit, preferably applesauce, being permitted to quench the thirst. If meat or salty food is given during this treatment the amount of urine voided will again in-

crease rapidly. If the total daily quantity of urine be examined before and during treatment it will be found that while the amount varies very much the total quantity of nitrogen and chlorides excreted will remain about the same for the twenty-four hours. It may be stated, therefore, that diabetes insipidus is an affection of the kidneys, which does not enable these organs to void the urine in its normal concentration. To avoid retention of excrementitious matter more water will be necessary, and hence the thirst will be excessive. It is absolutely wrong to deny these patients water, since serious disturbances will follow. The diagnosis of diabetes is occasionally difficult since hysterical polydipsia, non-bacterial pyelitis and other conditions may give rise to the same symptom complex. Much information can here be obtained by changing the diet and by giving salt: if a nitrogenous diet and a dose of 20 grams of salt are followed by a marked increase in the amount of urine with little change in the concentration the case is most likely one of insipid diabetes, while if there is no pronounced variation in the amount, but a higher percentage of salt and nitrogenous matter, another diagnosis must be made. The ability of the kidneys to excrete concentrated urine, if the amount of excrementitious matter in the blood is large, is called the concentrating power; the reverse, the diluting power. In parenchymatous nephritis both the concentrating and the diluting powers are very much diminished; that is, the food and the amount of water ingested change the amount and the concentration of the urine but slightly. In interstitial nephritis the concentrating power is much diminished, but the diluting power almost normal. In hysterical conditions both concentrating and diluting powers are normal, while in insipid diabetes the concentrating power is lost altogether, but the diluting power is normal. A slight increase in concentration may, however, be brought about here by means of therapeutic doses of theocin. Phosphate of soda will not increase the amount of urine either in health or in diabetes insipidus.

The Cause and Treatment of Baldness.

Waldo (Bristol Med. Chirurg. Journal) says that the researches of Unna, Sabouraud, and others, would lead us to look upon all forms of baldness as parasitic in origin. They say that thinning of the hair, whether general or beginning on the crown or at the temples and forehead (alopecia pityroides) can be produced by a microorganism. Seborrhœa oleosa is generally admitted to be at times physiological, but who is to say when the physiological limit ends.

Sabouraud thinks the microbacillus of oily seborrhœa finds its way into the hair follicle and causes sebaceous hypersecretion; then hypertrophy of the sebaceous glands; next, progressive papillary atrophy; finally, death of the hair. The late Wm. Anderson admitted the fact of the coincidence of the hypertrophied sebaceous gland, the dilated hair follicle, and the bacillus infested cocoon on the one hand, with the atrophic hair on the other as incontestable but thought it might be doubtful whether the order of histological events was that assumed by the eminent observer. It was at least possible, he thought, that the atrophy of the hair papilla in this form of alopecia was the primary condition, the hypertrophy of the sebaceous gland secondary, due, perhaps, to the diversion of blood supply from the dying structure to that which remains in full activity, and that the microbic invasion was to be explained by the lessened resistance implied by a lower vitality of tissue, the hair follicle remnant becoming a deposit for the dermal bacillus. In confirmation of this view he stated that coronal baldness started at a definite spot, thus lessening the possibility of its being seborrhœic or parasitic in origin, significantly coinciding with the site of the initial senile synostosis of the cranial bones, and that usually it set in at a period contemporary with this first step in sealing up of the skull, and at a spot which also coincided with the meeting point of the most distal filaments of the three principal nerves supplying the scalp and with the anastomoses of the cranial blood capillaries most remote from the heart. He also adds that thisform of alopecia is almost confined to men, while women, who are equally subjected to parasitic forms, are spared. It also appears to be manifested earlier and more constantly in men of educated classes than in those of the grades below, who wear less constricting, though more infective hats, and finally, it seems that it attacks men in the most perfect health and free in many cases from seborrhoea.

Sabouraud thinks the specific microbacillus responsible for the chain of histological events, by virtue of its toxins. The current view is that alopecia areata is parasitic in 95 per cent. of the cases. Crocker says he does not consider that there is any real etiological distinction between temporal and coronal baldness, and he adds that it appears to run in families occasionally, and there is also present, at times, a debilitating condition of the general health, at others a very robust health; and in the latter case no cause can be assigned. Norman Walker says that those who suffer from seborrhoea, (which, in his opinion, is the invariable cause of premature baldness,) and yet pre-

serve the hair, always have an abundance of oily secretion on the scalp and their hair early turns grey. He thinks the predominance of baldness in the male sex is probably explained by their more frequent visits to the barber.

He takes it for granted that seborrhoea, in some form, has a good deal to do with baldness, and adds Brooke's view of its pathology, "Apparently a dermatitis caused by the presence of one or possibly several microorganisms and leading to a specific irritation of the fat-forming functions of the skin." Unna's view, that the process is in the sudoriparous and not in the sebaceous apparatus, is not generally accepted.

In regard to treatment, Waldo advises men and women to wash the scalp at least once a week, especially after a visit to the barber and occasionally to soak their combs and brushes in 5 per cent. solution of carbolic acid. An important preventive precaution is to induce abundant blood supply by massage of the scalp with a rough towel by moving the scalp on the skull in different directions.

A tendency to seborrhoea should be treated with a microbicide, not with much hope of curing it, but to check it. As a palliative he suggests half an ounce of precipitated sulphur, made up in liquid paraffin, and applied to scalp every morning; for a non-greasy microbicide the same amount of sulphur in spirits of wine may be used.

Dangers of Official State Journals.

The Virginia Medical Semimonthly, for July 21st, writes: Nothing could more strongly impress the dangers of ownership and publication by a State society of its own journal than a recent occurrence in connection with the California State Journal of Medicine. In its May, 1905, issue, it says of the New York Medical Journal: "Its advertising pages are notoriously an abomination of desolations (sic), and even its editorial columns have been bartered for coin." The attorney for the New York Journal promptly wrote the Medical Society of the State of California, stating that his "client has a cause of action against you by reason of the publication of such false and libelous statements. While the person who wrote that article bears all the ear marks of a malicious and irresponsible individual, he at the same time represented the Medical Society of the State of California. . . . . On behalf of my client I therefore demand the immediate retraction of the said statement with the same prominence of the said libel, and in the same journal in which the said libel was printed. Before taking any further proceedings in the matter, I shall wait a reasonable length of time to hear from you."

The secretary of the California society replied in substance that neither his society nor members of its publication committee had the remotest desire to libel anybody, and asked "which of the expressions objected to, you consider libelous and offensive to your client; and also that you give me an idea of the nature of the statement which your client would like to have us publish?"

The New York Journal attorney replied, after calling attention to his former letter: "I assume that you have sufficient ability to write that such statement so made by you is false and untrue, without my sending a form of retraction for you to sign. You know that the statement is false, and that when it was written the writer of the same knew it to be false, and what we demand is that you say so in plain English."

Hence in the July, 1905, number of the California State Journal of Medicine, the following occurs, after some reference to advertising: "Consequently, we fully, freely, and unqualifiedly retract, and withdraw the statement quoted."

Such is an awkward position for any reputable State medical society to be placed in by the writer for the editorial pages of the journal "owned and published" by the society. Many an individual editor is recklessly fearless of consequences to self; but no man in an editorial chair has the right to place an organization he represents in such a position as to be compelled, under threat of law, to "fully, freely, and unqualifiedly retract, and withdraw the statement" which had previously been published.

It is all right for a society to adopt a journal as the medium of its publications. But unless the society well knows the temper of the editor of the journal "owned and published" by it, it should have a wise, conservative, and well remunerated committee on publications, before whom every article intended for its pages which even remotely attacks persons, or corporations should be submitted for approval.

We must commend the New York Medical Journal for its firm, but conservative manner in dealing with this matter; and we trust the affair will serve as a lesson to those State medical societies who own and publish their respective medical journals.

If journalizing transactions is to be the order of the day, it would be far better and safer for societies to contract with, and adopt some established reputable journal as the medium for its publications than to subject the organizations to the dangers of suit for libel because of an intrepid editor. Then the society cannot be held responsible —whatever damage suits the rashness of an

editor and proprietor of his own journal may bring upon himself. The case in point in these remarks is an illustration of the dangers of a journal "owned and published" by a most excellent and worthy State medical society.

Spontaneous Gangrene of the Leg in Popliteal Aneurism.

Arrou (The London Lancet) communicated an account of a case which showed that when gangrene followed on an operation for extirpation of a popliteal aneurism it was not always just to blame the operation. He said that every popliteal aneurism should be operated on, and that one should never be afraid of operating lest gangrene should supervene, for gangrene might occur in such cases without any operation. The writer mentioned the case of a woman aged fifty years, who came to consult him for a small tumor in the popliteal space. He finding that it was an aneurism, recommended operation, but the patient refused. One month later she returned with gangrene of the whole leg, which necessitated amputation through the middle third of the thigh. The operation was performed without the loss of one drop of arterial blood, and the femoral artery was completely blocked with a hard, dry clot. For prudential reasons a ligature was placed on this vessel, but this was the only ligature used. What was still more astonishing was that the wound healed by first intention, and that there was not the least sloughing of the flaps.

Investigations with Sahli's Test-Meal.

Oerum (Archiv. f. klin. Med.) concludes as follows:

1. Sahli's test-meal enables us better to understand gastric affections, because it permits estimation of secretion.

2. It enables us to differentiate a hyperchlorhydria from superacidity or secretion.

3. Supersecretion occurs in nervous dyspepsia, symptomatic dyspepsia in obstipation, enteritis, nephrolithiasis, cholelithiasis, teina, etc. It may also accompany a hyperchlorhydria.

4. Hyperchlorhydria occurs in most cases of ulcer of the stomach and chlorosis.

5. The test-meal permits differentiation between atony and supersecretion.

6. Disturbances of motility are more manifest than with Ewald's test-meal.

7. Estimation of fat is more readily accomplished by the modification used by the author and it requires no special apparatus.

8. The acidity figures for free hydrochloric acid are the same, for the total acidity a little less than with Ewald's test-meal (25-30 free HCI, total acidity 40-50).

A Case of Hematoma of the Ovary Simulating an Attack of Appendicitis.

Wilson, in the London Lancet, mentions the case of a patient, a girl of 19 years, was suddenly seized with colicky pain in the right iliac fossa while sitting at her work. She vomited once and the pain gradually subsided. There was a little more than the usual constipation. There was nothing to direct attention to the pelvic organs.

With pulse at 112 and temperature at 98.2 deg. there were tenderness and muscular rigidity in the right iliac fossa—apparently over McBurney's point. Per vaginam an elastic tender swelling was made out. The period had been missed and the possibility of ectopic was considered.

The patient was thought to be recovering from a mild attack of appendicitis, but in view of other possibilities a laparotomy was done. The appendix seemed normal, but its tip was attached to a pelvic globular swelling which on removal proved to be the right ovary filled with an ounce of dark blood. No trace of chorionic villi could be found; therefore hemorrhage into ovary.

The Induction of Labor.

Sheill (British Medical Journal) after describing five cases in which he succeeded in inducing labor at term he lays down the following course of procedure. If the os is small dilate up to about No. 16 or 18 Kelley's dilators, inserting then into the uterus three of the largest bougies capable of passing through the os at the same time and tightly plugging the vagina with sterilized gauze.

If this fails of its object after twenty-four hours, repeat the procedure and, as soon as the uterus is partly open, if contractures are not strong, use the eight-bladed dilator of Frommer to stimulate them. If no complications arise leave the case now to Nature. Should the membranes be accidentally ruptured during the manipulations then, and not till then, resort to the use of hydrostatic dilators.

The Prospects and Vicissitudes of Appendicitis.

Ballance (British Medical Journal) designates those surgeons as "opportunist surgeons" who indulge in rational medical treatment in certain cases and advocate an armed expectation with operative interference the moment the indications arise. He presents the dangers arising from such plan of treatment. Among the vicissitudes disturbing convalescence are arranged under three headings—persistence of symptoms, complications, and certain specific diseases.

The persistence of symptoms is due either to some difficulty, such as adhesion or abscess directly referable to the disease or the operation, or the presence of some other distinct disease. The author does not be-

lieve that after drainage of an acute abscess it is not necessary to remove the appendix. Attention is called to these patients who always insist upon having pain somewhere. Among the complications mentioned are: (a) abscess of the parotid; (b) thrombosis of veins; (c) subphrenic abscess; (d) intestinal obstruction; (e) ventral hernia.

The report of six cases of intestinal obstruction after several attacks of appendicitis complicated by adhesions and absess furnish one of the strongest arguments of early and complete operation as the rule of treatment.

In speaking of ventral hernia, he expresses a preference for the operation in which the rectus is displaced inward.

The following concluding remarks summarize well the chief points of the paper:

Lastly, it may be remarked that preventable deaths will still occur, and the prospects and vicissitudes of convalescence will continue to form material for lengthy statistical tables until the twin evils, procrastination and imperfect operation in appendicitis, are abolished from surgical practice.

Only recently I was present at a consultation, when the usual suggestion was made that the consultation should be renewed on the following day. Operation was, however, fortunately, done immediately and revealed a spreading peritonitis. The patient, if left till the following day, would have been, if not moribund, without doubt more profoundly infected. "Advice is sporting while infection breeds."

My conclusions are:

1. Every diagnosable inflamed appendix with signs of increasing local or general peritonitis should be removed.

2. Every appendix which has given rise to inflammation abscess should be removed.

3. In serious acute cases it is unwise to leave the appendix, as the primary site of infection is more likely to cause the continuance of constitutional symptoms than the spreading peritonitis around. Further, if left, it requires another operation for its removal.

4. "While anything remains to be accomplished," said a great statesman, "nothing is done."

The establishment of these rules would do away with most of the vicissitudes to which dubious counsels and halting execution continue to expose these patients.

We are told that in the country of the Brobdingnagians the laws are expressed in the most plain and and simple terms, and to write a comment on any law was a capital crime. Certain laws of surgery appear plain and simple. To recommend that an infected appendix should be left in the patient's body is a comment upon one of these laws which to me appears to be a surgical offence.

Bacon says: "Dangers are no more light if they once seem light. Nay, it were better to meet some dangers half way, though they come nothing near, than to keep too long a watch upon their approaches. For if a man watch too long it is odds he will fall asleep."

The true principles of action in the combining of great dangers alike, whether these dangers have to be confronted in the warfare that destroys men or in that in which we are engaged against disease and death.

Frederick the Great wrote in 1745: "The Saxons and Austrians had formed a design to enter my hereditary dominions to destroy them with fire and sword. I was beforehand with them; I carried the war into the heart of Saxony."

I venture to ask each one of you, if the cocci and bacilli should form a clear design to enter, through your appendix, into your hereditary dominion—namely, your peritoneum—to destroy you, would you "keep a long watch upon their approaches," would you "fall asleep" or "wait on Fortune, like a market," or would you promptly desire a Frederick, great in surgery, to be beforehand with them by carrying the war into the heart of your abdomen?

Kelling's Reaction in Carcinoma.

Fuld (Berl. klin. Woch.) deals with the serum reaction which Kelling has introduced for the diagnosis of carcinoma. Without going fully into Kelling's work, he briefly gives the basis of it as follows: Carcinoma comes into existence from the atypical development of foreign embryonal tissue, which is implanted into a defect of substance of the affected organs. In support of this theory, Kelling states that the carcinoma patient produces a specific precipitan in his serum which acts on his parasite. He has tested the serum on a number of patients, but points out that it is by no means a small matter to have to ask permission of a patient, who has to die soon, to withdraw some blood, or to have to take the blood. In several cases he found that the patients fainted from mental excitement. However, no actual harm was done by the bloodletting. It was not practised on patients who were very nervous or very ill. The author adhered strictly to Kelling's directions, only simplifying it in a small way. These modifications refer to the preparation of the tissue extracts made from embryonic tissue. The control serum (taken from persons not suffering from cancer) was, as a rule, supplied by himself. Fuld gives the etails of the working of the test, and dis-

cusses the rationale of adding some disinfectant, and came to the conclusion that, as even thymol produced a turbidity in itself, the test must stand without any such addition. In all he tested 16 cancer patients' serum; of these, two were not absolutely certain as regards diagnosis, so that he is inclined to disregard them. After one hour in no case was there the least trace of precipitation. In one case the serum of the carcinoma patient gave a distinctly more flocculent precipitation after 20 hours than did the control serum, but the reaction could not be regarded as typically positive. The author is willing to allow this one to pass as positive; all the rest were definitely negative. Whether his disappointing results depend on the omission of some important point which Kelling has not described distinctly, or on the failure of the test, he is not inclined to state, but he comes to the conclusion that, as far as he can judge, the reaction is not of value, nor does it supuort the etiological theory which Kelling has formulated.

Comparative Surgery.

Cushing (Bull. Johns Hopk. Hosp.) describes the plan which has been in use at the Johns Hopkins Medical School, of the development of the plan of teaching operative surgery, which is a distinct departure from the time-worn, yet excellent methods of conducting an operative course, which for the past generation has been widely adopted and generally regarded as most practicable by the surgical teachers in the leading medical institutions. This plan consists in endeavoring to emphasize and drill into the students the following points: (1) Surgical cleanliness, which must be learned early and become a successful operator's second nature, and which is necessarily disregarded in the methods used in teaching operative surgery in the dissection room; (2) the ability to dissect living tissues without so damaging them as to prevent perfect reactionless healing; (3) an acquirement of skill in the proper control of hemorrhage, and (4) particular technic of visceral surgery, whether abdominal, thoracic or intracranial. To properly emphasize these points the course has been started upon living animals, on which all the formalities that would be observed in regard to a patient admitted for treatment to the surgical wards of the hospital have been followed. Clinical histories have been kept on regular hospital history sheets; the effect of anesthesia on the pulse and respiration has been carefully recorded; the detail of the operative preparation both for the staff and patient has been followed; pathological and postoperative notes have been made, and in case of a fatality a formal autopsy performed, and its results added to the record. He considers that after a training of this sort, and with an acquirement of proper surgical reflexes, a student, when his turn comes, should be found a safe and valuable helper in the hospital operating room, where blunders in technic must not occur; and, furthermore, he may with profit to himself be an understanding onlooker at the surgical work of others.

Acne Vulgaris and its Treatment.

Wills (Bristol Medico-Chir. Journal) says that most cases of acne show the following sequence: (1) an oily skin; (2) comedones; (3) pustules; (4) "blind boils," with induration round the lesions. This sequence of events is not complete, for there are cases in which circulatory disorder is a marked feature, and is possibly primary. In such cases the sebaceous obstruction may be secondary to an inflammatory process, as in rosacea.

The following definition is given of acne: "An alteration in the contents and secretion of the sebaceous glands, leading to a viscidity thereof, with the formation of comedones, and with or without an attendant folliculitis or perifolliculitis."

Microscopical examination shows the comedo to be essentially a "hyperkeratosis of the outer third of the pilo sebaceous follicle" (Macleod). It is stated that the comedo itself is formed of epithelial cells, a large amount of grease, and millions of short bacilli described by Saboraud. It is also stated that the bacilli causes the inflammatory condition often attending the comedo, which leads to the formation of pus and granulomatous tissue. Presumably the oily secretion acts as a good culture medium for various germs. The bacillus appears to act by producing sufficient exfoliation of the lining wall of the follicle to interfere with the normal flow of the oil. A plug is thus formed, which causes distension, and eventually destruction of the gland, and, if the process extends through the follicular wall, to perifolliculitis and the formation of dense granulomatous tissue.

Acne is most common in adolescence, and often associated with seborrhoea capitis. It may occur in persons otherwise in perfect health or in anæmic persons. The fact that acne due to artificial causes, such as tar, etc., affects the same regions as ordinary acne seems to show that the glands affected—viz., those of the cheeks, forehead, nose, chin, neck, back, chest, backs of the thighs and arms—have some common peculiarity in structure. They are not connected with the large hairs, but with downy hairs, and acne does not affect the hairy scalp or the whiskers.

Predisposing causes of acne are dyspep

sia and constipation, want of fresh air and exercise, and unsuitable diet. Anything which causes flushing of the skin aggravates acne—hot drinks, alcohol, spices, etc. Fats should be limited in the diet, as they tend to form sebaceous matter.

In the treatment of acne, after removal of the predisposing causes, the following conditions should be fulfilled: (1) removal of the superfluity of grease; (2) destruction of the micro-organisms; (3) enucleation of comedones and pustules; (4) alteration of the skin and its secretion so as to make further infection less easy; (5) the maintenance of a more perfect hygiene of the skin.

To remove the superfluity of grease, the hyperæmia must also be relieved. Ichthyol, both internally and externally, is good for this purpose. It may be taken in pills or capsules, must always be supplanted by external friction. Sulphur internally has probably little effect, but calx sulphurata helps in the resolution of the indurated conditions. External friction with an alkaline medium is important—ordinary soap applied with flannel is sufficient for the purpose. Friction tends to empty the sebaceous follicles, to remove comedones, and to restore the tone of the skin muscles. Any attendant seborrhoea capitis should be treated at the same time.

After the soap friction some mild antiseptic should be used, but the antiseptic must be mild enough not to cause hyperæmia. Sulphur or ichthyol seems to have a specific action in inhibiting the micro-organisms.

When there are many pustules they should be incised before friction is begun. Expression of the comedones or pustules is not the best method: needling preferable, also drawing out the comedo with a large-barrelled suction syringe. Scraping the face with a blunt spatula is useful, but cannot be used when the face is sore. Shelling of the skin with resorcin is said to give good results. "It consists of the application of equal parts of resorcin and Unna's zinc paste, thickly spread, to the skin twice daily for three or four days. At the end of this period some soothing ointment is applied, and in a day or two the skin peels off in large flakes, bringing with it the hyperkeratotic horny layer, and a large number of the comedones. The method involves confinement to the house, and in that respect is disadvantageous; but it does more in a week than probably two months of the milder treatment will accomplish."

In the X-rays we have an agent which alters the skin secretions, stimulates the growth of the normal cells, and promotes the absorption of the granulomatous tissue, so that ulcerations heal, comedones are thrown off with the peeling of the skin, and the indurated tumours disappear without discharging. After a satisfactory reaction has been obtained, the parts treated by the rays are clear of comedones and pustules, showing only the scars of previous abscesses, while outside the exposed area comedones and pustules are as active as ever. The good result is not always permanent, but, after it, the skin may be kept clear by hygienic measures.

"One aims at obtaining a slight erythema, perhaps a little more pronounced than a sunburn. When this is obtained, the developing pustules appear swollen and larger and perhaps a few more make their appearance. A day or two later, however, the skin is seen to be dry instead of oily; the pustules have changed to papules with a scale, which is loosening on its apex, while the comedones are frequently so easily shed that they may be present one day and all gone the next. After this effect has been obtained, treatment is still continued for a while, maintaining the erythema, for in so doing a more complete exfoliatian of the skin is obtained, and those follicles which have not already taken part in the general process are induced to do so. Perhaps the most noteworthy points are the healing of the gaping craters left by previous small abscesses, and also the lessening, and finally the disappearance, of the indurations, which are so disfiguring and hard to relieve.

The Origin of Blood Platelets.

Priesich and Heim (Virchow's Archiv), in their investigation of the subject, employed a special combination of eosin and methylene blue. By this stain they were able to detect in blood platelets a ground substance filled with red granules, and a surrounding rim of protoplasm which stained like the red cells. Blood platelets were inclosed in the protoplasm of the red cells and less often in that of the large mononuclear leucocytes. There are distinct differences in the staining, however, between these included elements and the nuclei of the red cells. The position is eccentric or centric, and at times the various stages of extrusion may be observed.

By various experiments they proved that the substance of which the platelets were made, was chiefly nuclein. When two ligatures are applied to a large vessel, an examination of the stagnating blood is made after a certain time, the number of the platelets is not increased, proving that they occur as such in the circulating blood, and do not precipitate out when the blood is at rest, as has been heretofore affirmed.

Great importance has been attached to

the fact that if sublimate is allowed to act upon blood, structures resembling platelets are formed in great numbers from the red cells. These are not true platelets, as they can be obtained from the blood of chickens, which never contains platelets. These facts, as well as the observation that animals whose red cells are normally nucleated do not have platelets, render it quite probable that the platelets are merely the degenerated and extruded nuclei.

Many nucleated red cells were found in the bone marrow of young animals, and among these cells were found many whose nuclei stained similarly to the normal platelets, so that the various transition stages could easily be studied.

It is affirmed that both red cells and platelets are destroyed in the spleen, as on examination of this organ large collections can generally be discovered. The platelets are not indispensable for the clotting of blood, but, being degenerated structures, are the first to show those chemical changes which are necessary for the production of clotting.

Surgical Physiology.

Crile (Bulletin of Johns Hopkins Hospital) says that this is one of the most interesting and ingenious articles that has appeared in recent surgical literature. It is so replete with general information that a review must necessarily be of far less value than a perusal of the article in the original. He takes up the manifestations of inhibition and obstruction to respiration in a way that is valuable to the operator. He recommends the anesthetization of abdominal cases and of cranial cases with heightened blood pressure. The well known nerve blocking is given due attention, as is the matter of respecting the physiologic resistance to the amount of surgery to be done. Blood pressure in the various forms of infections is most interestingly dealt with, as is the surgical physiology of the heart and lungs. He has succeeded in causing the heart to beat again after it has been stilled from six to twenty-four minutes, something which was formerly thought absolutely impossible. He has kept up the heart beats for eleven hours in an animal whose medulla had been removed.

Carcinoma.

Koenig (Deutch. Med. Woch.) presents a clinical study of carcinoma, based upon his own observation, and comes to the conclusion that it is a disease which can develop where there is epithelium. Primary carcinoma occurs only where there is epithelium. It must be considered, for a time at least, purely a local condition. The writer lays some stress upon this point, because the laymen believe that carcinoma is a general affection and at once incurable. It is impossible to say just how long carcinoma may be considered a local disease, and for that reason it should be removed as promptly as possible. A large number of carcinomata, even after they have passed the local stages, are still curable, if only the surrounding glands are involvod. Metastases preclude a cure. The author considers cachexia the result of a breaking down of the carcinoma. There is such a thing as disposition to carcinoma. Old age may be considered a general disposition. Special dispositions are heredity, trauma, ulcers, increase of the functional action of a gland. The doctor does not believe that carcinoma may be transmitted from person to person; never having observed, for instance, that one who nurses a case of carcinoma, has ever developed it. Though he believes that carcinoma may be transplanted, he is not aware of a case ever having occurred through inoculation. Surgeons often inoculate themselves with syphilis and tuberculosis, but he has never heard a case in which they had infected themselves with cancer. The author says that carcinoma is steadily increasing, but rather that the apparent increase is due to more correct methods of keeping statistics, and to more exact methods of diagnosis.

The cause of carcinoma is still unknown, but the author feels convinced that it is a specific one. The surest treatment is radical operation, inasmuch as surgical interference cures about 30 per cent. of the cases. The Roentgen rays have produced a cure in a large number of small carcinomata, and have given relief in large, inoperable ones. If one desires to use it in preference to the immediate use of the knife, it is best to apply it in small skin carcinomata and in inoperable cases.

Inoperable Carcinoma and Roentgen Rays.

Freund, according to The Medical Press, exhibited a patient to the "Gesellschaft," who came to him about the beginniug of December with a carcinomatous tumor of the breast, too far advanced for operative purposes, on which he applied the Roentgen Rays with wonderful success. When she saw him first the tumor was larger than a man's fist, of stony hardness, and firmly attached to the bony walls of the thorax. The surface of the tumor was ulcerated over the area of a five-shilling piece, while the axillary and subclavian glands were greatly enlarged.

On January 9th, after eight applications of the rays, there was intense reddening, associated with severe pain over the site of radial application. The swelling by this time had fallen to the size of an apple, with discharges of caseous matter, fever, and

lowered appetite, while the neuralgic pains deprived the patient of a comfortable night's sleep. These pains were confined to the arm and mediastinum.

The rays were again applied between February 6th and 11th, and March 6th and 10th. After February 18th the discharge began to change to a watery consistence with separating lamina; the swelling quite disappeared, and the edges of the wound subsequently became red and granular till it ultimately healed.

To-day a large cicatrix marks the site of the morbid growth. In the centre of this are a few excoriations about the size of pin-heads, but all the rest, which is about the size of the palm of the hand, is covered with healthy skin. The glands in the armipt and subclavium are decidedly less, while the patient is immensely improved. The pain is now more like a drawing of the cicatrix, but recently a bronchial catarrh has set in, which is probably due to pulmonary metastasis; otherwise the patient expresses herself as perfectly well again, and can enjoy herself.

Treatment of Hypertrophy of the Prostate by the X-Rays.

Moszkowicz (The London Lancet) has demonstrated several cases of enlargement of the prostate in which he had tried a new method of treatment. As the enlargement was due to the hypertrophy of the glandular tissue chiefly, and as this tissue was easily influenced by the x-rays, he directed the rays of a "soft" tube through the rectum toward the gland. Of three men, the first was sixty-six years old, and after three exposures, each lasting fifteen minutes, he was able to pass urine spontaneously. The second patient was seventy-seven years old, and his prostate was enormously enlarged and very hard. The same treatment was adopted, and now he can pass urine freely, but some of it is still retained. The third patient was completely cured. Two of them had severe hemorrhagic cystitis, and one had epididymitis after seventeen days. It was difficult to say whether these complications were the effects of the rays. As regards the technique a rectal speculum was used, and the surrounding parts were covered by lead. He intends in the future to use bromide of radium, which may be applied by means of an ordinary catheter, and can be directed exactly toward that part of the gland which compresses the urethra.

Tumor Growth In Its Reference to the Causation of Disease.

Chiene in the Edinburgh Medical Journal publishes his introductory lecture to the class of operative surgery in the University of Edinburgh. He deals with the causation of disease with special reference to tumor growth. Referring to the reproductive action inherent in the human cell, he quotes what he said on that subject in 1896, "Our bodies are made up of these cells, and there is going on within us the double process of nutrition and reproduction, which is in every particular the prototype of the processes of nutrition and reproduction as we see them in the higher animals and in man, with all the physical forces in full play, so closely associated with these two great manifestations of life. In each cell we have, possibly, the father side (the paternal), with its outcomes, strength, courage, endurance, self-reliance; and the mother side (the maternal) with its outcomes, tenderness, gentleness, unselfishness, and self-sacrifice." The terms "maternal" and "paternal," may be modified probably after puberty, as to the acquirements of the individual from surroundings and from himself by two important organs, the testicle and ovary; in their essence, however, they are derived from our ancestors. He says that if the ancestral—maternal and paternal—elements can be modified by the testicle and ovary, we are justified in assuming that we may modify the maternal and paternal by therapeutic means. In a few words, if the maternal and paternal elements become unbalanced, producing disease, cannot the balance be restored, and may not the hidden functions of the reproductive cells be of use to us in an attempt to explain the causation of disease?

With regard to the causation of tumor growth, he says that in the consideration of the life history of anything living we must consider (1) its tissues, (2) its surroundings, and (3) its adaptation to these surroundings. According to Dr. Chiene a tumor starts because of a want of balance in the two elements (paternal and maternal) in the cell, and it continues growing because that want of balance is present in the surrounding cells, or in the fluid by which the cells are bathed, that is in the cell food. The abnormal agent acts when the two elements in the tissues have lost their balance.

Early uncontrolled maternity is, in the opinion of the writer, the essence of malignant tumor, and the cells of a person predisposed to tumor growth have the maternal element in a marked degree. He believes that too many investigators are spending their time in searching for the "abnormal agent when they might be better employed in devoting their energies to the study of the question: Why is the cell fertile to an abnormal agent?

Some New Remedies in Eczema.

Mayer (Edinburgh Medical Journal) finds that lenigallol, a triacetate of pyrogallic acid, except in very obstinate forms, as perhaps that attacking the palms, remarkably effective in converting a moist eczema into a slightly reddened, scarcely itching, and moderately scaly condition of skin, in the course of from two to six days. One commences with a vaselin starch paste containing 10 per cent. of lenigallol, but the proportion may soon be increased to 20 per cent. It is spread thickly on, then enveloped in wool and bandaged, or simply powdered. When renewed morning and evening the coating is first softened with vaselin, and removed without friction. The skin becomes colored a blackish-brown, and this staining gives the best indication of the extent of the disease. The author has not observed any irritation following its use. When this stage of dry scaliness is reached, a basis for the employment of tarry preparations is formed.

Thigenol is sometimes valuable as an introduction to the pure tars. This is a substitute for ichthyol, which, like it, contains sulphur intimately combined and possesses antiseptic and absorption-favoring properties. It may be used as a 20-per cent. paste or ointment. Or empyroform, a happy conjunction of oleum rusci and formaldehyde, may be made use of. It suits best as a thick lotion: Empyroformi, 15; talci, glycerini, aa 10; aq. destil., 20. This is non-irritating, and at the same time rapidly removes the last traces of itching. When such preliminary substances have been used for a time, we may proceed to the tar treatment proper. For this, as a mild and satisfactory drug, he reccommends anthrasol, which is colorless, has but little tendency to irritate, and almost no odor. It may be applied as a 10-per-cent. zinc vaselin paste, or dissolved in olive oil in from 10 to 30 per cent. At the same time it is well to be cautious, in washing with water, to select only superfatted soaps of good quality, and to prohibit friction. As a sequence of scratching and varicosity ulcers difficult to heal are apt to develop near the malleolus. The applications should be desiccating and disinfecting, and of these tannoform dusted on seems best to restrict microbic proliferation. If any oozing points are powdered over, and a cheesecloth bandage carefully adjusted, complete healing occurs under a hard, dry scab.

Recurring Phlebitis of Obscure Origin.

Briggs, (Bull. Johns Hop. Hosp.,) reports a series of cases of recurring phlebitis which clinically are characterized by a progressive and relapsing course which are obscure alike in their pathology and etiology. Their clinical picture is so consistent and their cause so obscure that the author considers them to be instances of idiopathic recurrent thrombophlebitis. The cases seem, after the most careful consideration, not to be dependent upon a gouty, septic or traumatic origin. He makes the following etiological suggestions: We are familiar with the predilection of thrombotic processes within the arteries for such portions of the vessel wall as are affected by arteriosclerosis. The acute and inflammatory affections of the endocardium are specially prone to attack valves already damaged by preference over those with unaltered endothelial coverings. We also know that phlebosclerosis is a condition quite analogous anatomically to arteriocapillary fibrosis, that it is frequently associated with the latter condition, may occur very early in life, and has hitherto attracted rather a curious interest, as having no particular significance. May it not be that the cases of venous thrombosis with which we are dealing depend for their immediate and localizing cause on such sclerotic changes in the walls of the veins? If a cachexia may determine the production of a thrombus within an artery, it seems very easy to believe that with the much slower current of the blood within the veins, an extreme or even beginning phlebosclerotic change might determine the deposition of a fibrin coagulum from the blood stream. Sclerotic alterations of the vein walls are often observed to progress by fits and starts, at times with great rapidity, and then to remain in a stationary condition for years. It is suggested that such a rapidly progressive stage of the fibrosis, if associated with a small, even at first a purely partial thrombosis, might produce just such a series of phenomena as are shown by the present groupe of cases.

Malignant Embryoma of the Ovary.

Hicks and Targett (Jour. Obstet. and Gyn. Brit. Emp.,) report two cases. One case occurred in a girl fourteen years old who entered the hospital with a high temperature, rapid pulse, and a rigid and tender abdomen. A large tumor rose from the pelvis and extended to the umbilicus. After operation the patient remained well for three months, when she returned to the hospital suffering from ascites and rapid wasting. At a second operation a large quantity of serous fluid was evacuated, sessile and pedunculated growths studded the intestines and omentum and a large mass extended deeply into the pelvic cavity. After paracentesis had been performed five times the patient died seven months after the first operation. Microscopical examination of sections of primary and secondary

growths showed the tumors to be composed of tubules and cysts, nodules of cartilage and bone, epithelial pearls and a groundwork of fibrous, muscular and fatty tissues. The second case occurred in a girl, six years old, who died two months after operation. The manifestations of recurrence and the microscopic findings were similar to those of the first case. These rare tumors usually occur in young adults, but may be met with in childhood. They may attain a large size, are usually pedunculated and devoid of adhesions unless the pedicle has become twisted. Secondary growths are frequently restricted to the peritoneum, they may be of the same composite structure as the primary growth or be wholly composed of sarcomatous elements. Pains and ascites are constant symptoms. Ovarian tumors exhibiting an irregular disposition of embryonic elements are very liable to be malignant.

Intestinal Obstruction and Pelvic Operations.

Conner, in The London Practitioner, says that this condition is relatively frequent. He believes the operation which stands pre eminent among all others in causing this complication, to be supravaginal hysterectomy. While adhesions may be present without producing any symptoms, the presence of attacks of localized abdominal pain, associated with vomiting, after an abdominal operation, and especially after a pelvic one, should raise the question of the advisability of exploration. The intestinal obstruction usually results from the intestine forming a kink, or better a volvulus, using the uppermost adhesion for a fixed point on which to rotate. The cause of this volvulus, in far the majority of cases, is an increase of pressure within the bowel, produced by gas formation, meteorism. The origin of the meteorism is to be found in some error of the diet or digestion. Sometimes strong peristalsis draws out the adhesion into the form of a band, under which a coil of small intestine may be ensnared. Meteorism produces a volvulus in almost every obstructed loop. These adhesions antedate the obstruction, showing that the latter is merely a complication, and raising the suspicion that, for every case in which this does occur, the probability is, that there are many in which it does not occur. The presence of the uterine stump among the small intestines undoubtedly disposes them to become adherent. How this adhesion takes place is not quite clear. Perhaps the most favored suggestion is that the row of sutures and knots offers the opportunity for the bowel to adhere. In consequence of the sutures being tied firmly, ifnot tightly, the tissues within their grasp are lessened in bulk, fluids being squeezed out of them. There is a tendency for each stitch to lie in a groove of its own making. The fluids which have been expressed in tying the ligature will swell the bulk of the contiguous tissues. The slight injury, thus inflicted, calls forth a reparative inflammatory, reaction, augmented later by the irritative action of the aseptic stitch, causes a small effusion of lymph which soon covers the stitches. In the case of a uterine stump, with gaping of the peritoneal edges, the formation of adhesions with the intestines is invited.

Nasal Disease as a Cause of Headache.

Whitehead, (British Medical Journal), says this condition is certainly the cause of head-aches in a certain percentage of cases, although it is doubtful whether it is possible for headache to be produced by any nasal condition which does not give rise to discharge or to obstruction to normal nasal respiration.

In all cases of persistent headache a careful examination of the nose should be as much a routine practice as the examination of the urine, the teeth, and the eyes; since in some instances the nasal symptoms may be ignored by the patient, and a careful examination of the nose will be necessary to establish the diagnosis.

Suppuration in the accessory sinuses and marked nasal obstruction, constant or intermittent, should be thoroughly treated.

Small spurs, deviations, and hypertrophies not causing obstruction should be left alone, as no relief will be given from the headaches by treatment of these.

If the middle turbinate bones are enlarged and pressing upon the septum, especially upon the tubercle, and if all other possible causes of headache have been eliminated, partial removal of the hypertrophied bone should be advised, since in many cases relief is given.

Eclampsia Toxines.

Dienst (Centralbl. f. Gyn.) brings out a new eclampsia theory. He suggests that eclampsia results from the transgression of fetal blood into the maternal blood on account of a leakage in the placenta. The author's theory is based upon the assumption which of late is decidedly gaining in favor, that fetal blood is heterogen to the maternal; that is, acts upon maternal blood like the blood of another species. By injecting fluid into the shed placenta of eclampsia patients through the umbilical arteries he could demonstrate that in the majority of the cases the integrity of the placental covering was disturbed. In a similar way he injected methylene blue into the still adherent placenta immediately after the expulsion of the fetus, and succeeded

in certain cases in sending the methylene blue into the maternal system, from which it was then eliminated through the kidneys. His experiments and deductions probably do not settle the vexed problem of the etiology of eclampsia, but they must undeniably be regarded as a most interesting addition to the various eclampsia hypotheses which are based upon the "lateral chain theory" of Ehrlich.

Chorion-epithelioma: Prognosis and Treatment.

Hammerschlag (British Gynæcological Journal) gives a detailed report of five cases, with a critical consideration of their history in relation to the points at present in question. On the whole he accepts Marchan's views. The writer draws the following conclusions: Growths of chorionic epithelium in the uterus may, perhaps under the help of curettage, undergo involution. Nevertheless a malignant tendency may have existed in the cells of the chorionic epithelium, and may be manifested by the formation of malignant chorion-epithelioma outside the sphere of its settlement. Renewed curettage may accidentally give evidence of the unsuspicious nature of the latter, and is therefore not a sufficient basis upon which to found the clincal treatment and prognosis. A considerable time (two to five years) may elapse between the pregnancy and the fatal termination of the chorion-epithelioma dependent thereon.

Prevention of Diphtheria.

Cobbett, (Journal of the Royal Sanitary Institute) expresses the opinion that some day diphtheria will be stamped out, and epitomizes measures taken by himself and Graham Smith at Cambridge and at Colchester which should tend to this desirable end. These measures he states as follows: "The sanitary authority should be prepared beforehand with a skilled bacteriologist, and all the necessary appliances and organization for collecting and examining swabs taken from a large number of persons. On the first news of the outbreak, perhaps in one of the schools, several hundred swabs may have to be examined in the course of a day or two, and every hour's delay will multiply their number. Hence the swabs and serum tubes must be kept ready prepared, and the latter carefully sealed with paraffin, so that they may not become dry. Moreover, a clerk should be available for drawing up lists of contacts, etc.—viz., the brothers and sisters and other inmates of the houses occupied by notified cases, the schools attended by contacts, the intimate playmates of the infected children, and their immediate associates in class. All such people are to be examined by culture for the diphtheria bacillus.

"The value of these examinations is in proportion to their earliness. One must therefore be prepared to make great efforts at the very outset. To form an idea of the work required, it may be stated that at Cambridge, when a small outbreak occurred in the schools, we were at one time examining over 100 swabs a day, and would have liked to have done many more if we could.

"During the outbreak in Cambridge the school attendance officer (who was able to afford the time owing to the schools being closed) gave very valuable assistance in drawing up our list of contacts. Several medical students, who were attending classes in the University, volunteered to go round and collect swabs.

"The great majority of infected contacts were isolated in a home opened for them, and put in charge of a trained nurse Antitoxin was given to all on admission to this home, in case any of the children in whom we found diphtheria bacilli should have been in the incubation stage of the disease; for it was of extreme importance to prevent the occurrence of a case of diphtheria in the home, otherwise parents would not have allowed their healthy children to be sent there. As it was, much valuable time was spent in explaining to parents why it was desirable to isolate their children.

"No kind of compulsion was used, and it is gratifying to be able to say that the great majority of parents proved to be very reasonable when the matter was clearly explained to them.

"The success of the measures taken during this outbreak was very marked.

"The outbreak at Colchester was in some ways much easier to deal with, for we were able to put into action at once all the labour-saving details of the method of examination and the organization which had gradually grown up during the Cambridge outbreaks.

"On the other hand, we had to deal with an outbreak which had already been in action for three months before our work began; thus we had a very large accumulation of contacts with past cases to deal with.

"Naturally, it took some time to work through so many examinations; nevertheless, when these were cleared off, and we were able to deal with all contacts as they occurred, the decline in the notification-rate was very marked."

He summarizes the opinions he has formed from his experience as follows:

"The principal means of combating diphtheria are, after the isolation of persons actually sick, the detection by bacteriological examination of those who go about apparently in good health, carrying in their

throats or noses the diphtheria bacilli; and the isolation or control and treatment of such persons, and of convalescents from the disease, until diphtheria bacilli can no longer be cultivated from them.

"No doubt the satisfactory isolation of those healthy persons who carry about the bacillus will often prove impracticable. In such cases they should be warned that they are a source of danger to others, instructed to take certain precautions which need not be detailed here, be induced to use antiseptic mouth-washes and gargles, and should be kept under observation.

"In the case of children and young people employed in large business houses, isolation will usually be practicable, experience among the poorer classes of Cambridge and Colchester having shown that parents can usually be persuaded to consent to the removal of their children to a suitable isolation home."

Thrombosis of the Superior Vena Cava.

Cobbledick (The London Practitioner,) mentions the case of a woman, aged forty-two, who was admitted to hospital suffering from general anasarca, most marked about the legs, face, and right arm. She had worked as a laundry hand since fourteen, married at twenty-one, and had eleven miscarriages, but no children. She was very subject to bronchial colds for the last eight years. She was quite well until eight weeks before admission, when she began to suffer from cold feet and legs. Two weeks later the legs began to swell, and the face became puffy. The facial swelling has gradually increased, but not so the swelling of the legs. Five weeks ago she noticed a swelling at the root of the neck on the right side, accompanied by neuralgic pains. The swelling lasted two weeks and then suddenly disappeared, to be followed by swelling and pain in the right arm; she then became very ill, and had severe headache. She was very cyanosed, and both sides of the face were very œdematous. The right arm and hand were swollen and dusky. The legs below the knees were œdematous. The left arm was not swollen, but was dusky. The right side of the neck and right arm were very tender over the vessels. There was tenderness in the right iliac fossa and along each saphenous vein. The heart sounds were normal, pulse fairly good; no trace of atheroma. The lungs shewed bronchitis and crepitations at the bases, but no embarrassment of respiration. Two days after admission the left arm began to swell. The amount of urine passed in twenty-four hours was 15 ounces; it contained a slight trace of albumen. She died five days after admission. At the autopsy the innominate veins and the superior vena cava, as far as the opening of the vena azygos major, contained reddish-brown granular thrombus adherent to the wall and filling the lumen. The heart shewed considerable hypertrophy of the right ventricle and tricuspid dilatation, and the lungs shewed some emphysema. The other organs were normal. There was slight thickening of the tissues of the anterior mediastinum. Thrombosis of the superior vena cava is a very rare condition, even when there is an adequate cause. Out of twenty-nine cases collected by Osler, only three were primary. Osler divides the cases into two classes: (1) Where the thrombosis is due to disease within the vein (ten cases); (2) where the thrombosis is due to disease outside the vein, such as aneurysm, syphilis, etc. (nineteen cases). This case the author regards as one of simple phlebitis, as the mediastinitis was not sufficient to be regarded as a cause. No microscopical examination of the vessel wall was made.

A New Operation for the Cure of Vaginal Cystocele.

Groves (Jour. Obst. and Gyn. Brit. Empire) describes a new operation for cystocele as follows:

A transverse incision is made from one labium majus to the other about 3 c. m. behind the urethral orifice. The incision divides the whole thickness of the vagina.

The two margins of this incision are then retracted upwards and downwards, and with the finger or handle of a scalpel the uretha and bladder in front are separated from the vagina behind. The margins of the levatores ani muscles are then sought for and defined in either angle of the wound. It will be found that they can be easily brought into apposition with little or no tension. Two or three mattress sutures are then passed right through both muscles as far from their margin as can be done without undue tension, and tied on the outer surface of one or other. These will lie about 1.5 c. m. from the margins of the muscle, which are then united by fine interrupted sutures.

This forms a medium muscular mass about 2 c. m. long and 1.5 c. m. thick, lying beneath and supporting the base of the bladder. The margins of the original incision are now united by catgut, after any redundant vaginal mucous membrane has been removed. The cicatrix lies in a very superficial position—where a little gauze packing serves to keep the wound clean.

Cause of Death After Burns.

Pfeiffer (Virchow's Archiv), has found considerable changes in the blood, manifesting themselves in the altered shape of

the red cells and the hemoglobin contents. The urine is at first hemorrhagic, and later has an acid reaction and contains albumin. The cerebral symptoms amount to a primary stage of irritation, followed by apathy and somnolency, but sometimes there is a secondary increase of reflex irritability just before death. The pathological lesions include changes in the kidneys, ecchymoses and ulcers in the intestines and stomach, and degeneration of the heart and liver. The urine possesses distinctly toxic properties toward rabbits and other animals, which increase steadily up to the fifty-sixth hour. It could furthermore be shown that this toxicity is not due to the presence of blood-coloring matter or to the acid reaction of the urine. The poison could be detected earlier in the urine than in the serum of the animals experimented upon; it possesses both a local necrotic and a general neurotoxic action. If injected into mice a period of irritation will first be noticed, followed by paralysis and cessation of respiration. With some urines the necrotic action is more pronounced, and rarely hemorrhages into the intestines and diarrhea will follow. The toxin is easily decomposed if exposed to daylight and also passes through bacterial filters. The principles causing necrosis are destroyed by short heating, while the neurotoxic agents are frequently unaffected or rendered more potent. It is not likely that these toxins are formed at the site of injury, but the proteid molecule is probably merely altered by the heat, and from this altered molecule the toxic molecules are then formed in the body. Hemolysis and agglutination of allied blood, by means of the blood of scalded rabbits, could never be observed to any marked degree, and the death of the latter can certainly not be attributed to blood changes. The intestinal ulcers so commonly seen are not caused by a direct action of the heat, since they are also frequent, if distant parts, such as the hind legs are scalded. They are due to the toxin, toward which the intestinal mucosa is particularly intolerant.

The Large White Kidney.

Peacocke (Dublin Journal of Medical Science) mentions the fact that in many cases the symptoms of chronic nephritis do not immediately follow the subsidence of the acute symptoms, and that in the interval the patient is apparently in good health. This explains the fact that some cases are regarded as chronic from the beginning, the acute attack having been overlooked. This view of the ætiology of chronic nephritis simplifies the classification of diseases of the kidney associated with albuminuria. The classification which the author would favor is the following: (1) Nephritis, acute and chronic, the latter representing the chronic parenchymatous nephritis, suggests the large white kidney of nephritis. The small white kidney is generally considered a later state of this form. In some of the cases the renal epithelium is not rapidly and completely destroyed, sufficient being left to sustain life until increasing fibrosis causes shrinking of the kidney substance; (2) granular kidney, chronic from the beginning and usually due to the toxic action of alcohol, gout, or lead; (3) the kidney of amyloid disease.

An Inquiry into the Etiology of Infantile Eczema.

Hall, (Brit. Jour. Dermatology,) divides the causes into three groups; 1st, The theory of digestive disturbance, with various subdivisions. 2nd, The theory of external irritation. 3rd, The group composed of all the remaining theories—vaccination, dentition, diathesis, etc. The weight of opinion, undoubtedly, he states, judged by numbers alone, is in favor of the first; the second, of which Hebra is the greatest supporter, who believes the irritants to be innumerable, and Unna, with his microorganism, irritant theory; and finally, Brocq, denying the latter and leaning toward a modification of Hebra's teaching. The third group finds few supporters.

The weight of evidence, he thinks, is insufficient to support the theory of digestive disorders or malassimilation. His conclusions are as follows:

(*a*) No history in most of the cases of digestive disturbance having preceded or accompanied the first appearance of the eruption.

(*b*) Most of the cases showed no digestive disturbance during the course of the disease.

(*c*) Neither rickets nor malnutrition was present in any considerable number of the cases.

(*d*) Most of the subjects were breast fed at the time of eruption, several breast fed alone, others having an occasional biscuit or other food in addition. Only a small percentage were bottle fed.

(*e*) In most cases previous children had sucked under similar conditions, and had remained free from these troubles.

(*f*) There was no evidence of excessively frequent child bearing, over-sucking, or illness of the mother.

(*g*) A very small percentage occurred in the three summer months, when gastrointestinal disturbances are most common.

A few general observations are added. He asks for instance, why the eczema continues after the digestive disturbances are regulated or removed? Why does not the eczema begin at weaning time, when the

irregularities of diet are greatest? How is the fact of a generalized recurrence explained by the infant rubbing itself, when there has been no change in diet?

As regards the external irritant theory he is unable to deny the possibility of a constant pathogenic organism, but the presence of one is not satisfactorily demonstrated. 1. In almost every one of his cases the eruption began on the head or face, which in the infant is practically the only exposed part.

2. The compáratively constant age at which the eruption appears, when the infant is first released from the more extreme protection which it received during its first few weeks of life.

3. The greatly increased percentage of cases which begin in the colder months of the year, varying with temperature changes, and particularly indicating an increase in number where there is sudden decrease in temperature.

Edema of the Feet and Legs.

Bryant (The London Practitioner,) mentions a case in which the excessive ingestion of chlorides was followed by not only retention of fluid in the tissues and a consequent increase in weight, but also by marked edema of the extremities. The patient was accustomed to taking 300 to 600 grains of salt a day. Examination of his urine showed the presence of 1.86 per cent. of chlorides, i. e., nearly three times the normal amount. After reducing the amount of salt ingested the edema disappeared and the urine contained only .98 per cent of chlorides. Widal and Javal found that, in cases of interstitial nephritis, doses of sodium chloride up to 150 grains did not give rise to edema, but, in cases of parenchymatous nephritis, the result was different, edema was produced. They found that the chlorides were not excreted entirely, and that, as a result of their retention, the fluid in the tissues was retained. They further showed that by increasing the amount of chlorides in the diet the edema increased; but, on the other hand, if the ingestion of chlorides was diminished the tissues were drawn upon for their reserve chlorides, and as they were used up the edema disappeared. They also demonstrated that there was a definite relation between the hydration of the body and chloride retention, by changing three men suddenly from a diet rich in chlorides to one almost devoid of chlorides, the result being a reduction of the body weight of four or five pounds. The belief expressed by Widal and Javal, that the elimination of chlorides by the kidneys is a specialized function of these organs, offers the best explanation of the occurence of edema of the legs in this case. It may be presumed that for a considerable time the kidneys had been able to deal with the excessive amount of chlorides presented to them for elimination, but it is equally reasonable to suppose that sooner or later there would be a limit to this overwork, followed by a breakdown if persisted in, and that it was a failure of this specialized function to continue at high pressure which led to an abnormal retention of chlorides in the tissues, and thus produced the dropsy.

Colles' Fracture.

Fullerton (Medical Press and Circular) gives his observations on seventy cases that have been under his care for the last thirteen months, and studies them in reference to cause, age, sex, line of fracture, implication of the ulna, impaction, comminution, displacement of the fragments and consequent deformity, complications and treatment. The writer mentions the fact that the usual statement of the text-books to the effect that the accident is produced by falling on the outstretched hand is perhaps not correct. When a person falls with his hands outstretched to save himself the limb is not usually completely pronated; it is one half way between complete pronation and the mid-state between pronation and supination. The hand is about three-fourths pronated. The effect of this position is that the ulnar border is directed slightly downwards, and first comes in contact with the ground and gives a line of fracture that is somewhat toward the radial side as well as backwards and upwards. When both boxes are broken at the same level the cause is more apt to be a fall on the radius or on the lower end of the forearm than on the outstretched end. When the hand is in the mid-position between pronation and supination and the patient falls on the ulnar border alone a form of radial displacement of the lower fragment, with slight or perhaps no dorsal deformity, is produced. Permanent deformity is very liable, if not certain, to ensue in this variety of case. When a patient falls on the back of a hand he may fracture his radius at its lower end and the fragment may be displaced forwards instead of backwards.

As regards age and sex, 54 per cent. occur between the ages of thirty and fifty and 38 per cent. after fifty. The largest number of cases occur between the ages of thirty and forty, twelve of these were males and five females, although, taking all the cases together, the number was twenty-eight males and twenty nine females. In men 75 per cent. of fractures occur before the age of fifty; this percentage may be explained by the fact that the observations were made in a ship-building town.

As to the position and line of fracture, he states that probably most cases of Colles' fracture are situated within the last inch of the radius. Colles, in describing the injury, says that the fracture is situated about one and a half inches above the carpal end of the radius. He calls attention to a spike extending up the shaft on the outer side and to a slight degree on the inner side. The presence of these spikes, as well as the oblique direction of the line of fracture, are explained by the arrangement of the spongy and compact bone. The compact bone terminates rather abruptly almost exactly one inch above the styloid process on the outer side farther down to the margin of articular surface of the head of the ulna in the inner side—that is, three-eighths of an inch from the end of the bone. It extends lower down on the anterior than posterior surface.

Fracture of the styloid process of the ulna is very frequently present; indeed, this bone is fractured much more frequently than has been supposed—52 per cent. in the author's series. Fracture of the styloid process of the ulna is recognized by pain and tenderness, often out of all proportion to the gravity of the condition. Crepitus may not be present; the small fragments may unite sometimes in normal position and sometimes a little to the radial side, or it may remain distinct from the ulna—a frequent occurrence. In other instances it becomes thickened and enlarged, or it may disappear altogether. He says that impaction of the radial fracture does not occur with the frequency that was formerly supposed. He explains the appearance of impaction as seen in a skiagraph by the presence of the two lateral spurs. He believes that impaction does not often occur to a degree that will prevent satisfactory reduction.

As regards deformity, there is much variation; in some cases there is no deformity, owing to the fact that there is only a fissure fracture. Fractures with deformity are classified as follows:

1. Those in which dorsal displacement is the principal feature. These are by far the most frequent.

2. Those in which the displacement outward is most marked.

3. Those in which the displacement is forwards—a very rare form.

In general terms, the displacements are as follows: The lower fragment of the radius is displaced upwards, backwards and outwards. The articular surface of the radius is rotated on its transverse axis, so that instead of being downwards and forwards, it looks downwards or downwards and backwards. It is also rotated on an antero-posterior axis, so that the direction, instead of being downwards and inwards, becomes downwards or downwards and outwards.

Ligation of the Aorta; Its Physiologic and Therapeutic Meaning.

Katzenstein (Archiv. fuer Klinische Chir.) has done a large number of animal experiments in the effort to show the various results which may follow ligation of the largest artery. In fact, he did 105 experiments upon 45 animals, most of them dogs, and came to the conclusion that the peripheral pulse ceases at once if the vessel be completely occluded. He has proved that this had not been completely accomplished in many of the cases where this operation had been performed upon the human. He says that the arterial tension increases greatly and remains so during the days following the operation, although certain circumstances may prevent an immediate increase after ligation. He says that the collateral circulation which prevents gangrene of the extremities, is established in an immense number of vessels too small to be named, both those in muscles and others. It is interesting to note that a tremendous hypertrophy of the heart takes place as an evidence of nature's effort to overcome the obstruction in the circulation. The paralysis of the lower extremities and bladder is shown to be of a peripheral type and to have nothing to do with an anemia of the spinal cord. Degeneration is seen in the muscles and great disturbance in the circulation is noted in the wall of the bladder, leading sometimes to perforation, but usually these manifestations are transitory. This operation has been done fourteen times upon the human, and in every instance the operation has produced death directly as he shows, although in one or two instances this was considerably delayed. The operation can promise absolutely nothing of therapeutic value. It should, of course, never be done for hemorrhage, because there are easier ways of controlling the same, and as to curing an aneurism of the aorta, that is impossible, since the vessels which go off lower down will very soon develop enough to supply the sac with plenty of blood. A serious heart lesion follows it, the aorta may rupture at the site of ligation and in addition to being very dangerous the procedure can do no good.

Surgical Treatment of Gastric Ulcer.

Moynihan (Brit. Med. Jour.) says that there are few catastrophes so awful in their suddenness and in their intensity as the perforation of an ulcer. Obviously if the patient's life is to be saved, it must depend entirely upon early recognition of the lesion.

Perforation has usually been described as acute and chronic. The author has, however, found a number of cases which should justly be classified as subacute. In the acute perforation, the lesion occurs suddenly and completely and the intestinal or gastric contents flow directly into the peritoneal cavity. In the subacute form, the ulcer probably gives away almost as quickly as in the acute, but on account of its small size or to the relative small amount of material in the alimentary canal or possible to a plugging of the opening, the damage inflicted is less. Furthermore, typically in the subacute form, there is usually a certain amount of pain before perforation. In chronic perforation a protective peritonitis has had time to develop at the base of the ulcer. In other words, the entire lesion has been walled off. In all probability medical treatment alone cannot save any of the cases of acute perforation. For convenience of description, the author has arranged the cases of hemorrhage in four groups. In the first, it is latent or concealed, is always trivial and often inconspicuous. In the second, it is intermittent, but occurs in moderate quantity, often spontaneously and at infrequent intervals. The patient's life in this class of cases is never jeopardized from the hemorrhage, although anemia is very constant. In the third class of cases, the hemorrhage occurs generally but not always after an exacerbation of chronic symptoms. It is rapidly repeated, is always abundant. Its persistence and excess cause grave terror and will, if unchecked, be the determining cause of the patient's death. In the fourth series of cases, the hemorrhage is instant, overwhelming and lethal. In dealing with these hemorrhages, two plans may be followed. By the first the surgeon searches for the ulcers and deals with them directly. By the second he deals with them indirectly by performing gastro-enterostomy and thus giving the ulcer an opportunity to heal. First thought would suggest that the primary method should be the ideal one. It has, however, been definitely shown that in many cases it is utterly impossible to find the bleeding point. Furthermore, once found, it has been shown to be often impossible to check it. Again the bleeding is very frequently from a multiple source. Gastro-enterostomy is curative of hemorrhage for the following reason: It immediately stops the distention of the stomach. The author has not had a single case in which the arrest of the hemorrhage has not been permanent, but many prominent surgeons including Kocher, have had failures. This Moynihan ascribes in every case to the use of the Murphy button, which has fallen back into the stomach and thus continued the traumatism to the ulcer. The symptoms caused by chronic ulceration are most variable. Dyspeysia and chronic ingestion so-called are both due undoubtedly in a majority of cases, to a mechanical change in the stomach, the result of chronic ulceration. The symptoms are determined very largely by the position of the ulcer, but size and extent of the lesion are also determining factors. Should the ulcer, for example, lie in the body of the organ, it may in its contraction give rise to an hour-glass stomach. The best symptomatic results are obtained by gastro-enterostomy in those cases where the ulcer is located at or near the pylorus. Probably there is no operation in all the domain of surgery comparable to the results obtainable in these cases. As time goes on, it will undoubtedly be shown that all cases of recurring dyspepsia should be treated by surgical methods.

Functional Insanity.

In a treatise on this subject Jones (The London Practitioner) has the idea that many of the morbid mental conditions known as insanity are functional, and that therefore there are diseases of function as well as of organs. He says that while we are accustomed to find in disease fine structural alterations, which account for the morbid phenomena, yet nature may experiment in so fine, subtle and obscure a manner as to alter the function of an organ or group of organs, without leaving any evidence of definite or appreciable change in structure. There are many cases who suffer from perverted sensations, or anesthesias, parasthesias and dysesthesias, from pains or algesias, from loss of power or paresis, from various affections of the sense organs, and even from mental abnormalities, yet who have no discoverable nervous lesions to account for these symptoms, and whose lowered vitality and consequent incapacity can only be described as functional. In support of this view the author states that if we except definite lesions accompanying paretic and other forms of dementia, certain neuronic and other changes in acute delirium, and the deficiency of brain development in idiocy and imbecility, there is no pathology of insanity. He includes in the class of functional insanity which have no demonstrable pathological lesions the following classes of cases: Hysteria, epilepsy, hypochondriasis, chorea, suicidal manifestations, some forms of alcoholism. Throughout this class there is always an inherited tendency toward the production of the same mental affection.

The Operative Treatment of Rectal Cancer.

Taylor (Medical Press and Circular) describes his operation for removal of the rec-

tum in all cases of cancer, and prefaces his description of this operation by a few remarks on the general subject. Particular attention is called to the anatomic significance of the rectal fascia which separates the rectum from the sacrum and coccyx. Unless this anatomic structure is taken into consideration the operator who approaches from behind is apt to think he is in immediate contact with the rectum after the bone is removed and spend considerable time in merely detaching this fascia. By opening the fascial sheath promptly the peri-rectal fatty tissue is at once exposed and the rectal wall identified. The author believes that any malignant growth in the rectum can be detected by digital examination.

The sphincteric zone was not involved in any of his cases. Particular attention is called to the selection of suitable cases for operation. Extension of the growth beyond the peripheral confines of the bowel, more especially in front, should be regarded as a distinct contraindication for operation. The best way for roughly determining the local extent of the disease is to introduce the examining finger to the upper border of the growth and drawing the mass down toward the anus, observing how far the rectum maintains its mobility. A wide range of vertical mobility is particularly favorable.

He gives special attention to the careful preparatory treatment of these patients. Several days should be devoted to the preparation of the patient. Large doses of castor oil, about three doses altogether, at intervals of forty-eight hours, together with daily irrigation of the bowels is necessary. The diet should be as light as possible. It should be one of the great aims of operation of excision to preserve the sphincter intact and capable of carrying on its normal functions.

End-to end junction of the healthy segments of the rectum after excision is not at all satisfactory.

He brings out the following points: Ether anesthesia; thorough irrigation of the bowel; the patient is placed upon the left side with an air cushion beneath the great trochanter; an incision about five inches long is made exactly in the middle line from the middle of the sacrum to within an inch of the anus. This incision is carried to the bone. The soft tissues on either side of the coccyx and lower three-quarters of an inch of the sacrum are cut away and the sacrum is sawed across transversely three-quarters of an inch above the sacro-coccygeal articulation. The pelvic fascia is next divided longitudinally and the rectum is isolated from above downward. The author opens the peritoneal cavity high up at an early stage in the operation on both sides and passes a strip of gauze around the rectum to serve as a traction loop. The dissection is now carried downward below the limits of the cancer without much hemorrhage. The rectum is then divided above and below between two stout silk ligatures, and the cut ends are cauterized. The lower end of the gut is everted through the anus and traction sutures placed upon the upper stump are used to draw the healthy bowel through the anal opening. The everted anal mucosa is now sutured to the protruding bowel and the pelvic structures are repaired. The circular ligature on the protruded bowel beyond the point at which it emerges from the anus is left on for about forty-eight hours. This operation can be completed in an aseptic manner.

He calls attention to the fact that a few cancers come to our notice in an operable state. Most minute attention to aseptic details is insisted upon.

Infant Mortality.

Carpenter (The British Journal of Children's Diseases) gives some startling figures taken from the registrar-general's returns for 1904. These show the infantile death-rate of England to be excessive, and it is held to be a standing menace to the country. The waste of infant life is a class mortality, and is practically confined to artisans and laborers. In the upper and middle classes the mortality is less, but they are prone to suffer from dietetic disorders which lead to physical breakdowns from readily preventable conditions. During the past decade the birth-rate in the United Kingdom has steadily diminished. Had it not been for immigration the population of England would have decreased. The largest factor in this mortality is food. This could be diminished by breast feeding and by the use of pure cow's milk. Breast feeding should be encouraged, but where it is necessary to resort to artificial feeding cow's milk properly diluted according to the age of the child should be substituted. Patented foods are a detriment. A thorough supervision of the milk supply is the most important thing in preventing infant mortality. The reduction of the present high infantile mortality-rate is a complex social problem and demands the adoption of a variety of remedial measures and the cooperation of all classes of society to bring about a successful result.

Chemistry of Iodin in Goiter Cases.

Kocher (Clinical Med.) performed a large number of experiments on patients

with various forms of goiter in order to determine whether iodin administered as potassium iodid was excreted more or less rapidly than in healthy persons. Patients who had had complete thyroidectomy for goiter or who showed congenital absence of the gland excreted the iodin more slowly and less completely than normal individuals. Patients with goiter which showed decrease in size during administration excreted iodin rapidly and often in larger quantity than administered. Those with goiter of long standing which showed no improvement varied little from normal excretion or were somewhat less complete. After 48 hours, in all cases, the amounts were inappreciable. Diet had no influence on the results, If iodin benefits the patient it will do so at once, and if it does not, thyroidectomy is the only cure.

Treatment of Cardiac Asthma.

Merklen (International Clinics) says that the three chief elements of these attacks are pulmonary stasis, spasmodic nervous dyspnea and cardiac asthenia. The first therapeutic indication is to resort to derivation or depletion by the use of mustard leaves, dry or wet cups, and in severe cases of actual bleeding. To calm the nervous factor small injections (1-24 to 1-12 grain) of morphin may be given, along with nitroglycerin, caffein, camphorated oil and ether (internally or freely by inhalation). The third indication is for the use of heart tonics, such as hypodermic inffiections of caffeine, ether or camphorated oil. These patients should avoid exposure to cold, fatigue, emotions and alimentary excesses of all kinds, and reduce the sodium chloride in the diet. They should be given theobromine ten to fifteen grains per dose, for long periods combined from time to time with digitalin.

Action of Bitters on the Stomach.

Starzhesko (Roussky Vratch) found experimentally that bitters increase the physical stream of gastric secretion. It remains to be decided by further investigations whether this increase is the result of a simple reflex, or of a complicated nervous mechanism, involving the cerebral cortex. The practical deductions from this research are summed up as follows by the author: Small amounts of bitters must always be used, as the administration of large doses has the opposite effect from that desired, and the repeated use of large amounts may produce a permanent hyposecretion in the stomach. Bitters must always be administered in such a form as to excite the nerves of taste, while the drugs are taken. In other words, the use of bitters in the form of pills and wafers or capsules is not rational. Bitters must always be given before eating, and best ten minutes or fifteen minutes before.

Human Milk in Consumption.

Mitchell, (Brit. Med. Jour.) after quoting from Buchan's Treatise on Domestic Medicine, certain passages to show that over 100 years ago the open air treatment of consumption was recommended, further quotes from the same work the following unique case:

Some extraordinary cures in consumptive cases have been performed by women's milk. Could this be obtained in sufficient quantity, we would recommend it in preference to any other. It is better if the patient can suck it from the breast, than to drink it afterwards. "I know," he says, "a man who was reduced to such a degree of weaknesss in a consumption, as not to be able to turn himself in bed. His wife was at that time giving suck, and the child happening to die, he sucked her breasts, not with a view to reap any advantage from the milk, but to make her easy. Finding himself, however, greatly benefited by it, he continued to suck her till he became perlectly well, and is at present a strong and healthy man."

Ampullary Tubal Pregnancy With Torsion of the Pedicle.

Bidone [British Gynecological Journal] reports this rare case. There was a tumor at the left side of the pelvis, evidently formed from the dilated ampulla of the tube at the part corresponding to the isthmus; the pedicle was twisted rather more than one revolution to the left. The pavilion was obliterated, and the external surface of the fetal sac was roughened, but entire. There was no blood nor any residue of precedent effusion in the peritoneal cavity. The sac when opened showed marked turgidity of the veins, and in two places extravasation of blood within its wall corresponding to the tubal decidua. The fetus, from five to four months development, had not been long dead, and was well preserved and fresh.

The symptoms of torsion of the the pedicle of a gravid tube are similar to, but more serious and explosive than, those associated with the torsion of an ovarian cyst.

In short, owing to the arrest of circulation in the gravid tube, alterations take place in its peritoneal investment, which soon lead to the formation of adhesions with the other visceræ, or with the parietal peritoneum, where it is in contact with the fetal sac, and the new vessels formed in these adhesions may in some measure contribute to the nourishment of the sac.

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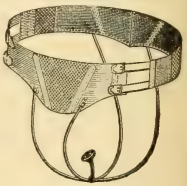

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Albu [Therap. d. Gegenwart] two forms of chronic constipation—the first, and by far the most common, due to atony of the of the intestine; the second, much less frequent in occurrence, due to a spastic contraction of the muscular wall of the intestines, developing in neurotic individuals on the basis of a previous atonic constipation. It is the latter which he discusses. He mentions it in many instances analogous in character to the globus hystericus, spasm of the cardia of the stomach or of the pylorus. The spasm of the muscularis of the intestine or of parts of it develops at varying intervals for periods extending from hours to days or weeks. The spasm may be felt as abdominal discomfort, varying from mere uneasiness to severe colic. Objectively, the contracted band of the ascending or the descending colon can be felt, and when the rectum or sphincter ani is involved, the introduction of the finger meets with great resistance and causes great pain. Associated with this spasm may be some degree of enteroptosis, particularly involving the

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colon, and also a mucous colitis.

In treatment of the condition any measure which may act as a stimulant or irritant to the intestinal muscularis should be avoided, especially massage and laxatives. All therapeutic efforts should be directed toward allaying the irritable condition in which the muscular coat of the bowel is. To this end the following measures are outlined:

1. Warm or hot baths, either full or sitz baths, lasting ten to fifteen minutes, at a temperature of 30–35 degrees R.

2. Hot applications to the abdomen, which may be either dry or moist.

3. Warm oil enemas of linseed, sesame or castor oil, in quantities of eight ounces, given every night as a high enema.

4. As a medicinal sedative in combatting the painful muscular contractions, atropin has proved of great value.

5. The diet should consist largely of vegetables which have been carefully pre pared and from which all course masses of cellulose, which are likely to become irritant, such as hulls, skins, fibres, have been removed. Such diet may include all forms of wheat bread made of fine flour, vegetables which can be prepared as purees, soups, gruels, milk, and cooked fruits. Alcoholic beverages, condiments, cabbage, cucumbers, lettuce, radishes and cheese should be rigidly excluded.

6. Local treatment: A hard-rubber or metal bougie may be introduced into the rectum for a distance of 5 to 10 c. m., and allowed to remain for ten to fifteen minutes each day. This is of especial value in spasm of the sphincter ani.

Some Symptoms of Cerebellar Tumours.

Clarke (Bristol Med. Chir. Journ.) describes the chief points in the semeiology of the cerebellar tumours. Affections of hearing are common, owing to pressure on the auditory nerves or tracks. Impairment of hearing is more marked on one side, or may be unilateral. Associated with deafness may be tinnitus, especially, according to Ferrier, in tumours of the middle lobe. It is not uncommon for complete deafness to occur, associated with tinnitus, which may precede the pathognomonic signs of cerebellar tumour. Two cases of this kind are quoted which applied for treatment on account of deafness. In one case, however, there was commencing optic neuritis, and in the other incoordination of movement, symptoms incompatible with disease limited to the organs of hearing. But until these signs appeared the diagnosis must have been impossible.

A tumour of the corpora quadrigemina may also cause complete deafness, and it has been stated that the immediate cause of deafness due to cerebellar growth may be pressure on the posterior corpora quadrigemina and internal geniculate bodies, through which the central auditory tract ascends.

Attacks of auditory vertigo, or the set of symptoms known as Meniere's syndrome, are well known to occur occasionally in cerebellar tumour. They may or may not be associated with deafness, and consist of severe attacks of vertigo with tinnitus, ending in vomiting. If these attacks are the first sign of cerebellar disease, they may be mistaken for labyrinthine disease. The presence of optic neuritis will decide the question. Optic neuritis may, however, be absent even in large tumours of the cerebellum, and unlesss the other symptoms are pronounced, its absence may render diagnosis uncertain.

The cerebellum is one part of the brain in which a tumour may give rise to tremor of an "intentional" character. This may resemble that of multiple sclerosis in being absent when the limb is at rest, and evident on movement. Tremors of this kind sometimes occur in tumour of the brain in three positions; most commonly when they occur in the optic thalamus or mid brain; less often when the growth is in the corpora quadrigemina or cerebellum. Other characters of the tremor are its increase on emotional or other psychical excitation, its absence during sleep, the affection of the upper extremity only, at any rate for some time. Also, if spastic rigidity develops in the limb, the tremor diminishes or disappears.

Some Prophecies Regarding Children.

Wells (Scottish Med. Journal) says the appalling infantile mortality of our large towns, and the equally appalling conditions under which children are living and surviving, are only beginning to appeal to the imagination and the conscience of the general community. Anyone who knows anything of the facts, however, will admit that it would be impossible to elaborate an ideal reconstruction of society without paying some attention to the problem of child life.

Naturally, we find that infantile mortality will be reduced to a minimum. "There is no reason why ninety-nine out of every hundred children born should not live to a ripe age. Accordingly, in any modern Utopia, it must be insisted they will."

The first and most important step toward the attainment of such results must be the limitation of birth, for he adopts the conclusion which "Malthus has demonstrated for all time, that a State whose population continues to increase in obedience to unchecked instinct, can progress only from

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bad to worse." As to the means by which such limitation will be brought about, he does not enter into details, but there will be no State breeding of the population. The idea of the State selecting individuals in order to pair them is an absurdity. But it will be quite another thing for the State to impose limiting conditions, and to say, "Before you may add children to the community for the community to educate and in part to support, you must be above a certain minimum of personal efficiency, and this you must show by holding a position of solvency and independence in the world; you must be above a certain age, and a certain minimum of physical development, and free of any transmissible disease. You must not be a criminal, unless you have expiated your offence. Failing these simple qualifications, if you and some person conspire and add to the population of the State, we will, for the sake of humanity, take over the innocent victim of your passions, but we shall insist that you are under a debt to the State of a peculiarly urgent sort, and one you will certainly pay, even if it is necessary to use restraint to get the payment out of you; it is a debt that has in the last resort your liberty as a security, and, moreover, if this thing happens a second time, or if it is disease or imbecility you have

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As to the care of the children who are actually born in Utopia, we note with approval that the children are normally to be born into a home. Although his views regarding marriage are not strictly orthodox in the Christian sense, marriage will persist in his Utopia for several reasons, among them the general necessity for a home and for individual attention in the care of children. Children, he says, are the results of a choice between individuals; they grow well, as a rule, only in relation to sympathetic and kindred individualities, and no wholesale character ignoring method of dealing with them has ever had the shadow of the success of the individualized home. "Neither Plato nor Socrates, who repudiated the home, seems ever to have had to do with anything younger than a young man."

The mother, then, will continue to be the natural guardian of the child, but the modern Utopia will recognize motherhood as a service to the State and a legitimate claim to a living. To every married woman who is likely to become a mother the State will secure from her husband a certain wage to secure her against the need of toil and anxiety; it may pay her a gratuity upon the birth of a child, and continue at regular intervals to pay her sufficient to keep herself and her child in independent freedom, so long as the child keeps up to the minimum standard of health and physical and mental development. The State will also, naturally, forbid the industrial employment of nnrsing mothers, and of mothers who have young children to look after.

The advantages of such an arrangement, we are told, are that it will abolish the hardship of the majority of widows, who "on earth are poor and encumbered exactly in proportion as they have discharged the chief distinctive duty of a woman; and miserable, just in proportion as their standard of life and of education is high." It will also abolish the hardship of those who do not now marry on account of poverty, or who do not dare to have children.

Some such arrangement as this is merely the completed induction from the starting propositions that make some measure of education free and compulsory for every child of the State; and many of us are probably beginning to see that if we begin with free education we can scarcely logically stop at free dinners. But very few have had Mr. Wells's courage to try to work out the social condition at which one would stop. His ideas, therefore, are distinctly worth consideration. Criticism we can scarcely offer, because his proposals cannot, and are not meant to be taken as they stand. Indeed they are not, strictly speaking, proposals at all, but merely suggestions of things as they might be, and they must be considered in relation to other social conditions and arrangements. Economic conditions, for instance, are vastly different in Utopia from what they are with us; and many problems which vex civilized nations on earth—war and drunkenness, for instance—have ceased to interest any but antiquarians.

The Meaning of Fever During Parturition.

Ihm (British Gynecological Journal) believes the most important etiological factor in fever during labor is the rupture of the membranes too soon or in any early stage. The prognosis of such fever is little or no worse for primiparæ than for multiparæ. If delivery takes place spontaneously the prognosis is far better than if operative interference is required; under the former conditions multiparous women are more likely to have a feverish childbed. The protraction of labor after the waters have come away does not appear of dangerous import for the puerperium unless it extends beyond three days and the fever has come on very soon after the rupture of the membranes. The total length of the infection (from the observation of the fever, etc., to the end of the labor) is not sufficient basis for a definite prognosis; a very protracted infection is as likely as not to be followed by a fever-free puerperium. Nevertheless, cases in which the fever has come on only a short time (one or two hours) before delivery without any or only slight assistance offer as a rule a more favorable prognosis (e.g., fever due to feeble contractions through the head is at the pelvic exit). The intensity of the infection is a better criterion. Tympany of the uterus is alarming, as is also the complication of placenta previa. Elevation of the temperature and rigors during labor do not in themselves imperil the case. The condition of the pulse is important, and if it is persistently rapid the outlook is not favorable, especially if the temperature sinks or remains the same. Fever while the sac is unruptured seems to be less unfavorable. Therapeutically, prophylaxis is most important; the more rapid, simple, and natural the delivery in feverish labor the more reason is there to hope for a fever-free childbed.

A State Society for Colored Physicians in Virginia.

At a meeting of colored physicians in Richmond on June 26, a State medical association, to be known as the Old Dominion Medical and Surgical Society was organized. The following officers were elected: President, Dr. Charles R. Alexander, Petersburg; Vice-Presidents, Drs. W. E. Atkins, Hampton; R. J. Boland, Roanoke; and Albert Johnson, Alexandria; Journalist, Dr. E. R. Jefferson, Richmond; Recording Secretary, Dr. A. W. G. Farrar, Richmond; Corresponding Secretary, Dr. H. L. Harris, Richmond; Treasurer, Dr. R. E. Jones, Richmond.

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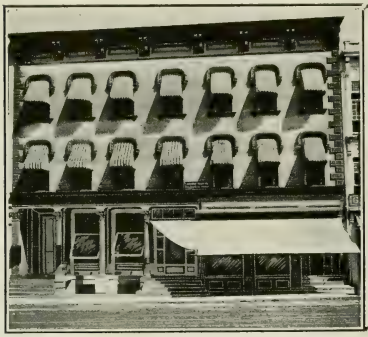

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operations of the past five or more years have been somewhat disappointing in their permanent results, but the writer believes that they should not be altogether abandoned.

There should be two things to consider primarily in deciding which operation is best in a given case, the location of the growth and the malignity of the tumor as determined by the microscopical examination.

The site of the cancer may be in the fundus, the cervical canal, the vaginal portion and the vagina. Fundus carcinoma should always be operated on vaginally. In cervical carcinoma, owing to its more rapid growth, the operation of choice is the abdominal, as thereby the danger of ureteral injury is lessened. Cancer of the portio is usually less malignant than cancer of the cervical canal, and here we may as a rule operate from below. Where, however, the cancer is at the outer edge of the portio the chance of early parametrial involvement is greater and we must consequently operate abdominally as this method gives a better oversight of the field of operation.

The microscopical examination of an excised piece of the tumor should guide us in the selection of our operative route. In the more malignant forms, operation, if attempted at all, should be from above. Less malignant forms, such as the scirrhous epitheliomata or the adenocarcinomata of the fundus, can be removed with less shock and with equally good permanent results by the vaginal method. Sarcomata and endotheliomata are to be classed among the malignant neoplasms. In fact, wherever the tumor shows a tendency to polymorphous proliferation its malignant character can be established, and the operative indications should be regulated accordingly.

The Treatment of Menorrhagia and Hemoptysis by Inhalation of Nitrite of Amyl.

Colman (Scottish Medical and Surgical Journal) did not feel justified in deliberately trying the effect of nitrate of amyl on the menstrual flow, but that accidentally, in the course of treating a case of angina pectoris, he found that inhalation of nitrite of amyl checked menstruation completely in this patient on several occasions.

This point attracted his attention, as at that time he had a patient suffering from menorrhagia, which he had found very difficult to relieve. It seemed to him that a drug which stopped normal menstruation would probably check the excess at least in his patient's case.

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Miss M. A. Newton, Superintendent.

sults of the experiment given by the author in his paper, it would seem sufficient to state that the drug was most successful. By means of it the loss of blood was kept well within normal limits after other methods had failed, and the patient's general condition very much improved.

Amyl nitrite must be looked upon as a distinct help in the treatment of inaccessible hemorrhage. Its utility in hemoptysis has been proved by Hare in a sufficient number of cases to warrant a much more extended use than would appear to be the case at present. In menorrhagia, in the one case now reported, the successful use was undoubted, and further trial in similar cases will, in the author's opinion, meet the same success.

There can be little doubt that the sudden lowering of the blood-pressure is the main factor in the checking of hemorrhage by inhalation of nitrite of amyl.

This sudden lowering of blood pressure allows clotting to take place in the bleeding area, be it ulcerated lung service or engorged endometrium. The blood pressure rises again, but gradually, and so the clots formed are not displaced. In short, the action of nitrite of amyl is a very close imitation of nature's method of checking very severe hemorrhage—viz., syncope, clotting in the ruptured vessels, gradual rise of blood-pressure, and return of consciousness, the rise of pressure being not rapid enough to expel the clots.

Lastly the inhalation of nitrite of amyl seems to have no bad effects on patients, the headache usually complained of being very transient.

A Test for Constipation.

Grant (London Lancet) says that many persons complain of constipation when this condition is not really present, and that other individuals are constipated who believe that their bowels are in good condition. The writer says that if the morning motion consists of food debris consumed the previous day, constipation does not exist. On the other hand, if the debris of food consumed several days previously forms the stool, constipation does exist. In many cases this is an important matter to determine. He suggests giving a tablespoonful of animal charcoal to doubtful subjects and noting the length of time required for it to appear in the stools. Normally it appears in 24 hours. In one of Grant's cases it was delayed a week. This patient went to stool every morning and therefore thought she could not be constipated. This test is valuable in suspected intestinal obstruction. By it, also, it is possible to convince mothers that their children do not need castor oil every night.

Tuberculosis of the Fallopian Tube.

Lea (Jour. Obstet. and Gyn. Brit. Emp.) says that the disease usually commences by the appearance of miliary tubercles in the mucous membrane of the tube. The process in most cases extends as a diffuse miliary tuberculosis, in which the mucous membrane is greatly thickened, area of caseation appear, the abdominal ostium is occluded and perisalpingitic adhesions are formed. As a result of closure of the ostium a tuberculous pyosalpinx may form. The process may take the form of a diffuse fibroid tuberculosis, characterized by a formation of considerable fibrous tissue in the walls of the tube. In some cases the tube may show merely catarrhal changes, and the tuberculous character only demonstrated by inoculation into guinea-pigs. The ovary escapes infection in the majority of cases. Contrary to the findings of most observers the writer did not find the uterus involved in a series of eight cases. An absolute diagnosis is not always possible, the previous history of the patient, menstrual changes, pain and leucorrhea are important. No rise of temperature is to be expected when the disease is limited to the tube. Bimanual examination is not especially suggestive unless tuberculous peritonitis is associated with tubo-ovarian swellings. The prognosis is reasonably good if the tubes are removed before general tuberculous infection has occurred. Without operation the disease steadily progresses to a fatal termination.

The Influence of Maternal Nourishment on the Development of Offspring.

Reeb (Hegar's Beitraege z. Geb. u. Gyn.) tests by animal experimentation the statement, made by Prochownick, that by altering and lessening the character of nourishment of the mother a decided influence can be exertedon the size and weight of her child. The so-called Prochownick diet has been tested, according to a recent summary, on forty-eight patients, with sixty-two births and but two failures. Apparently no harm was done thereby to either mother or child, and delivery was rendered comparatively easy as a result of the diminished size of the child.

Thus far no careful animal experiments had been made to test the truth of the general proposition. Reeb, in his work, used rabbits, and although encountering many difficulties finally obtained six series of tests which complied with all the demands of the experiment. During the first half of gestation the diet was always the same. Only in the second half was the diet in some cases poor. The poor diet consisted of green cabbage and leaves, hay, and straw; th rich diet, of the above articles

IN THE TREATMENT OF

ANÆMIA, NEURASTHENIA, BRONCHITIS, INFLUENZA, PULMONARY TUBERCULOSIS, AND WASTING DISEASES OF CHILDHOOD, AND DURING CONVALESCENCE FROM EXHAUSTING DISEASES,

THE PHYSICIAN OF MANY YEARS' EXPERIENCE

KNOWS THAT, TO OBTAIN IMMEDIATE RESULTS, THERE IS NO REMEDY THAT POSSESSES THE POWER TO ALTER DISORDERED FUNCTIONS, LIKE

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MANY A TEXT-BOOK ON RESPIRATORY DISEASES SPECIFICALLY MENTIONS THIS PREPARATION AS BEING OF STERLING WORTH.

TRY IT, AND PROVE THESE FACTS.

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THE success of Fellows' Syrup of Hypophosphites has tempted certain persons to offer imitations of it for sale. Mr. Fellows, who has examined samples of several of these imitations, finds that no two of them are identical, and that all of them differ from the original in composition, in freedom from acid reaction, in susceptibility to the effects of oxygen when exposed to light or heat, in the property of retaining the strychnia in solution, and in the medicinal effects.

As these cheap and inefficient substitutes are frequently dispensed instead of the original, physicians are earnestly requested, when prescribing the Syrup, to write "Syr. Hypophos. FELLOWS."

SPECIAL NOTE.—Fellows' Syrup is never sold in bulk, but is dispensed in bottles containing 16 oz.

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with the addition of bread and fresh carrots. The same animals were impregnated by the same buck in succeeding months. Reeb found that the mother animals would with poor nourishment give birth to fœtuses weighing on an average 41.2 per cent. less than under rich diet. One experiment with a similar result was performed on a dog. The decreased weight he found by chemical analysis to consist in a reduction neither of the total ash nor of the nitrogenous material, but primarily in a reduction of the total quantity of fat. His experiments would tend, therefore, to confirm the hitherto successful clinical observations made in the use of the Prochownick diet, and to encourage its use in cases where pelvic contraction made a small development of the child desirable or imperative.

The Prochownick diet consists, not in a reduction of the total quantity of food, but in giving food that is rich in albumen, but poor in water and carbohydrates. He enforces this diet only in the last eight to twelve months of gestation.

The Bacillus Colic, Communis as a Cause of Septicaemia.

Morehead (The London Practitioner) describes a fatal case of B. coli septicæmia. The patient, a man, thirty-seven years old had always been well, up to his present attack, which was characterized by a pyæmic temperature curve, a papular rash, and slight nervous symptoms. Physical examination was negative, as also were numerous blood cultures. Headache, vomiting, and coma, supervened, and were followed by death. Cultures from cerebrospinal fluid and spleen pulp gave pure cultures of B. coli communis.

Escherish, who first described the B. Coli communis, was of the opinion that it was quite harmless to man, and that its importance depended principally on its ability to aid in the process of intestinal digestion. Later, however, other investigators (Javel and Wurz) demonstrated its pathogenicity. It has been identified as the cause of cholera nostras, peritonitis, cholangeitis, cystitis, endocarditis, meningitis, arthritis Cases reported by Henschen and Siredey prove that the organism may cause a pure septicæmia.

Miscellaneous.

Questions for Examination Before the Kansas State Board of Medical Registration and Examination, July 12, 1905.

ANATOMY AND HISTOLOGY.

1. Describe the portal circulation.
2. Give the histology of the heart.
3. Describe the spinal column, naming the divisions and number of bones in each.
4. Give the histology of the spinal cord.
5. Give the names, origin and distribution of the fifth, seventh and eighth nerves.
6. Describe the fetal circulation.
7. Trace a blood corpuscle from the heart to the end of the great toe, and back to the heart.
8. Number and name the bones of the carpus and tarsus.
9. Give the histology of the kidneys.
10. Describe the diaphragm and give the blood and nerve supply.

CHEMISTRY AND TOXICOLOGY.

1. What are the characteristic properties of bases and what of acids?
2. What are antidotes for poisoning by sulphuric acid?
3. What class of poisons does H_2SO_4 belong to and what are the symptoms caused by it?
4. What are the symptoms of slow arsenical poisoning?
5. What is the respective physiological effect of potassium and what of sodium compounds?
6. What are the antidotes for acute copper poisoning?
7. What are the two oxides of mercury? Give their symbols.
8. Which is the principal contamination of vinegar of the market and how detected?
9. How do the neutral fats behave under the action of pancreatin in the body?
10. Give two of the principal tests for sugar in urine.

OBSTETRICS AND GYNECOLOGY.

1. What are the indications for the use of forceps?
2. What are the conditions requisite for the application of the forceps?
3. Under what conditions would you induce premature labor?
4. What is version? How many kinds are there? Name them.
5. How would you perform each kind of version?
6. How would you treat tumors of the mammary glands in a general way?
7. Give diagnosis, prognosis and treatment of fibroids of the uterus.
8. Give the use of the curette.
9. Give the use of the tampon.
10. How would you treat a case of puerperal eclampsia?

PATHOLOGY.

1. Give pathological anatomy, definition, cause and symptoms of paralysis agitans.
2. Define, give causes, pathological anatomy, symptoms and diagnosis of proctitis.
3. Define typhlitis and perityphlitis and give differential diagnosis of each.
4. Give pathological anatomy, causes, symptoms of anæmia.
5. Define and give pathological lesions of spinal sclerosis.
6. Give cause, pathological anatomy, symptoms and diagnosis of simple neuritis.
7. Give cause, pathological anatomy, symptoms and diagnosis of tetanus.
8. Give pathological anatomy and differential diagnosis and causes of chlorosis, leucocythemia, and leucocytosis.
9. Give differential diagnosis of cholera morbus and enterocolitis.
10. Give differential diagnosis, pathological anatomy, causes and symptoms of gastric ulcer and gastric cancer.

BACTERIOLOGY.

1. What are the names of the classes of bacteria that produce disease and the names of the classes that do not produce disease?
2. How would you prepare a specimen to examine for bacteria with the miscroscope?
3. (a) What is the object of staining bacteria? (b) Give a detailed method of staining? (c) what

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are mordants?

4. What is immunity? What diseases are the dog, goat and the Algerian sheep considered naturally immune against?

5. (a) Describe the turbercle bacilli. (b) In what ways do persons become infected by them? (c) And in what way is the majority of tuberculosis contracted, except in children?

6. (a) Describe the bacillus of diphtheria. (b) How is antitoxin prepared, and give the theory of the action of antitoxin.

7. Name and describe the micrococcus of specific urethritis.

8. What are protozoa and what diseases do they produce when they enter the blood?

9. Differentiate between saprophytes and parasites.

10. What special methods are necessary for the culture of the anaerobic variety of bacteria?

PHYSIOLOGY.

1. Describe the nervous mechanism of respiration.

2. (a) Name the waste products of elimination. (b) The main channels through which each is passed.

3. What are the functions of the spinal cord?

4. (a) Describe the heart sounds. (b) Tell how each is produced.

5. (a) What are the functions of the sympathetic nervous system? (b) Give their origin and distribution.

6. Describe fat and tell where it is found.

7. What are the structures and processes obscure in nature?

8. What are the sources and distribution of heat in the body?

9. Describe the fetal circulation. How different from the adult?

10. What are the functions of the lacteals and lymphatic systems?

SURGERY.

1. Fractures: Mention five conditions wherein you are liable to meet with difficulty in bringing the fractured surfaces in contact and maintaining coaptation.

2. All positions and dressings that interfere with a certain rule in dressing fractures are harmful and must be avoided. What is that rule?

3. Give classification of fractures of the neck of femur.

4. Thoracentisis—when indicated; how performed?

5. Successful catherization depends upon what?

6. McBurney's point—where is it?

7. Normal salt solution—how prepared? When and how used by the surgeon?

8. What two important indications do the buried sutures meet in the modern treatment of wounds?

9. Define shock. What are the indications for treatment in cases of "severe shock" after injury?

10. Name some of the dangers to be avoided in operating for the relief of strangulated inguinal hernia.

OPHTHALMOLOGY, OTOLOGY, RHINOLOGY, AND MEDICAL JURISPRUDENCE.

1. Name the points of difference by which you may distinguish between acute tonsillitis and syphilitic sore throat.

2. Hypertrophy of the tonsils—give prognosis and treatment.

3. Define chronic rhinitis.

4. How will you distinguish nasal polypi from fibrous, sarcomatous and cancerous growths in nasal cavity.

5. Three types of corneal inflammation are recognized. What are they?

6. How do you examine the deep structures of the eye?

7. Name some pathological causes of acquired deafness.

8. Describe a method for the inflation of the Eustachian tubes and drum cavity.

9. In a case of complete inebriety, would a deed or contract executed by the inebriate be held valid?

10. If the medical man should compromise himself by a promise to cure his patient, will he be held by the law strictly accountable for the performance?

THEORY AND PRACTICE.

1. Give diagnosis, prognosis and treatment of diphtheria.

2. Give diagnosis and treatment of purpura.

3. Give diagnosis, prognosis and treatment of acute bronchial catarrh.

4. Write a page on the sounds of the heart.

5. Tell what abnormal sounds of the heart indicate.

6. Give diagnosis and treatment of acute peritonitis.

7. Name the chronic diseases of the liver.

8. Give the different steps in the examination of urine.

9. Write a page on epilepsy.

10. Give diagnosis and treatment of chorea.

MATERIA MEDICA.

1. How may medicine be administered?

2. What medicines should not be prescribed with gentian?

3. What are the therapeutical applications of hydrastus?

4. What are the medicinal uses of phosphorus?

5. What substances are incompatible with iodine and the iodides?

6. What is cod-liver oil, and what are its principal chemical constituents?

7. What are the physiological actions of the phosphates and hypophosphites?

8. What are cardiac stimulants, and name the remedies of this order?

9. How should acute alcohol narcosis be treated?

10. What are the therapeutical uses of chloral?

YELLOW FEVER.

Some Past Experiences Whereby What Can Be Expected in the Present Epidemic May be, Approximately, Judged.

Notwithstanding the government experts state that they are confident that the spread of yellow fever will soon be checked by the application of scientific principles in fighting the disease, one hundred and five new cases developed in New Orleans on August 12, making the highest record of any day since the infection began. With this addition the total list of victims in New Orleans reached 913. The unusual figures have been followed by much greater alarm than was felt the preceding few days, during which it was the general belief that the epidemic had spent its greatest force. The total deaths at this writing number 142. Nor has the epidemic been confined to New Orleans, new cases have occurred at other places, which goes to show that the plague has gone beyond the city limits, and is spreading.

August is generally believed to be the critical month in yellow fever epidemics, (although past experiences in no wise justify this belief). The record at this writing may and no doubt will be eclipsed and that notwithstanding the sanguine expectations of the government experts. In support of this view some statistics of the epidemic of 1858, in New Orleans, will show the course of the disease that year. The first cases appeared in the month of July, the latter part. The deaths were, approximately, in August 1100, in September 2200, or double the preceding month, October followed with about 1100 more, which made the grand total 4200 deaths that year. Judging from these figures the

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RESINOL is the specific for all forms of pruritus. There is nothing that produces such immediate cessation from its pain, burning, and intolerable itching.

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possesses the healing qualities of the Ointment, and is invaluable for cleansing affected parts.

I find by testing it that your Resinol Ointment is a most excellent preparation for all skin diseases; and for pruritus ani et vulvæ, I have never found anything better.—I. B. HARGETT, M. D., Cleveland, O.

I used your Resinol Ointment a short time ago in a most intractable case of pruritus ani which defied every other remedy used. It was relieved in a very few applications. I regard your preparation as a triumph over this detestable symptom.—J. G. KELLY, M. D., Hornellsville, New York.

I tried your Resinol Ointment on myself. I had suffered from pruritus ani, or marginal eczema, for 25 years, and had tried many remedies without any relief, until Resinol proved soothing and stopped the itching instantly.—J. T. HICKMAN, M. D., Mt. Jackson, Virginia.

Resinol Ointment is the first local application I have found, that has given lasting and gratifying results in the treatment of pruritus vulvæ.—DR. GRACE WINTERSTEEN, Harrisburg Pennsylvania.

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without heart depression.

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without bad after-effects.

Try Labordine in a critical case where other antipyretics have failed to give the desired results.

Dose—5 to 10 Grains.

Prepared in Powder and 5-grain Tablets.

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A method which immediately palliates the attendant paroxysms, inhibits injurious sequelæ, and, with attention to a strengthening diet, brings the case to an early termination, with a minimum of internal medication, is worthy of trial.

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worst is yet to come.

The experience of Philadelphia with yellow fever may prove of interest, even if only to afford material for comparison. Unfortunately, monthly reports of cases are not at hand, therefore, the yearly figures will answer for our purpose.

The first appearance of the infection in Philadelphia was in 1793, it was reported that "in 99 days upward of 4000 died, then in 1797, 1292; in 1798, 3645; in 1799, 1015; in 1802, 307; in 1803, 199; in 1805, 400; in 1820, 93; in 1853, 128; making a grand total of eleven thousand and seventy-nine deaths."

While the government experts are busily engaged in applying "scientific principles," the grim old reaper is very busy taking in his rich harvest. Scientists and other shining lights blinded by the "germ mosquito," excluding all other possible causes, stop up their ears to any and all suggested rational means whereby yellow fever might be robbed of, at least, its fatal character. Professional men, as a rule, are very much "hide-bound," will not accept nor test any remedy, treatment or probable theory, which do not originate from a medical constellation of the first magnitude. "Try all things and hold fast to that which is good" appeals to them only in well advertised "serums," "antitoxins," etc. Thoughtful investigations, with nature's physiological laws as a guide, is lost sight of in the strenuous chase after the festive and elusive microbe, germ, bacillus and congeners. Fashion in matters of medicine are as arbitrary as those of feminine attire. With all past errors, which have cost thousands loss of life, the sheep habit still obtained and is likely to continue for all time to come, e. g. Years ago, fever patients were forbidden water, bleeding, venesection was the rule, the old saying "When in doubt give quinine," and quinine in yellow fever was given, it slew its thousands in the hands of reputable doctors who felt sure that since there was fever "quinine must be the remedy." Routine, calomel, to-day, as it has been and will continue to be the most popular hand-maiden. Certainly, some good results have followed its use, as have also bad ones. Colchicum, potass iodide, salicylic acid, salicylates and other well known favorites still hold good. Notwithstanding that other far better remedies exist which replace these to advantage both as to curative properties as well as freedom from danger and disagreeable effects. Iodipin, syrup, acid hydriodic, eucalyptus preparations, and others too numerous to write here, we must not omit nascent nitro-hydrochloric acid, as a superior in every way to calomel. Eucalyptus is in every way superior to quinine. If used intelligently and the true drug is employed. But conservatism and a lack of the spirit of progress keep our medical men far behind the times. Fluid Extract of Boldo, (P. D. & Co.'s) in doses of from 8 to 15 drops will be found superior to all the pepsin imaginable. It is a true stomachic tonic and liver regulator, its effects are not merely temporary but the stomach is transformed into a healthy physiological condition capable of taking care of the food and its proper mission, that of nourishing the body.

When the powers of electrical vitalization will have been better understood by the Induction-Galvano-Faradic method, then a new era in therapeutics will dawn upon many benighted minds, many precious lives will be saved and much suffering avoided.—William Alexander Armstrong, M. D., 1808 North Park Ave., Philadelphia, Pa., August 18, 1905.

Cystitis.

The treatment of cystitis should be direct and indirect; whether it be due to gonorrhea, obstruction, or any other cause, the management is essentially the same. Here, rest is of first importance: such a condition of quiet is, at times, necessary that on the surface of the urine in the bladder there is not a wave or ripple.

The hips should be raised and the urine kept from the bladder neck; the general health should be cared for, and the use of such demulcent diuretics as will flush out the bladder with minimum discomfort. For the accomplishment of this purpose, the following is of service when the urine is alkaline and much decomposed :

Rx. Cystogen tablets, aa, 5 gr. No. XXV.
Sig.—One in a glass of water after each meal.

Disinfection of Genito-Urinary Tract.

In all cases where thorough disinfection of the genito-urinary tract is necessary, prescribe cystogen, in five-grain tablets, three or four times a day. This is especially indicated in gonorrhea in all stages, prostatitis, epidydimitis, cystitis, etc.—American Journal of Dermatology and Genito-Urinary Diseases.

The manufacturers of Sander & Sons' Eucalyptol were long ago honored by the distinction of counting European potentates (the King of Italy) among the patrons of their products. The analytical division of the Prussian Government forwarded them a recognition of the purity and genuiness of their article and the Australian Government Botanist pronounced it to be a most excellent preparation. These distinctions are in themselves such high tributes to superiority that implicit faith must be put in them; but the firm was not satisfied with getting only a one-sided opinion. They submitted their product to what they consider the most stringent and reliable test of all, viz:—to the clinical application by the practical American physicians. Universal endorsement by this distinguished body of men have unquestionably established the intrinsic value of Sander & Sons' Eucalyptol and thus the most skeptic must become convinced. The physician who relies on the efficacy of this special product will be spared the humiliation of discomfiture and failure so often met with, when the only too common substitution of the "just as good" is practised.

Amenorrhea.

Where the suppression is the result of sudden mental or physical shock, exposure to excessive cold or dampness, change of climate, etc., the function can be restored with absolute certainty and celerity by the administration of a few capsules of Ergoapiol (Smith).

Dysmenorrhea.

Whether neuralgic, membranous, congestive, inflammatory, obstructive or ovarian in character, responds readily to the pain-relieving and flow-augmenting influences of this product. Ergoapiol (Smith) causes the menstrual flow to occur without discomfort and brings the volume and duration to normal limits.

A Generous Gift to the S. A. L.

It is reported that Mrs. Ida M. Ryan, of Portsmouth, Va., wife of General Passenger Agent C. B. Ryan, of the Seaboard Air Line, has given $60,000 for the erection and equipment of four hospitals along the line of the Seaboard. The hospitals will be built at Portsmouth, Va., Hamlet, N. C., Savannah, Ga., and Tampa, Fla. Mrs. Ryan stipulates that the nurses employed shall be Sisters of Charity of the Roman Catholic Church.—Railroad Men.

Mrs. Ryan is one of the most generous ladies of America. In contributing four hospitals to the S. A. L. she has set an excellent example to the many families of means who are interested in American railways.—Int. Jour. Surg.

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Listerine "Dermatic" Soap contains the essential antiseptic constituents of eucalyptus (1%), mentha, gaultheria and thyme (each 1-2%), which enter into the composition of the well-known antiseptic preparation Listerine, while the quality of excellence of the soap-stock employed as the vehicle for this medication, will be readily apparent when used upon the most delicate skin, and upon the scalp. Listerine "Dermatic" Soap contains no animal fats, and none but the very best vegetable oils; after its manufacture, and before it is "milled" and pressed into cakes a high percentage of an emollient oil is incorporated with the soap, and the smooth, elastic condition of the skin secured by using Listerine "Dermatic" Soap is largely due to the presence of this ingredient. Unusual care is exercised in the preparation of Listerine "Dermatic" Soap, and as the antiseptic constituents of Listerine are added to the soap after it has received its surplus of unsaponified emollient oil, they retain their peculiar antiseptic virtues and fragrance.

* * *

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Dr. A. H. Ohmann-Dumesnil, Professor of Dermatology and Syphilology in the Marion-Sims College of Medicine, St. Louis, Mo., writes:

"I have treated a number of chronic ulcers with CAMPHO-PHENIQUE POWDER and have obtained most excellent results when other internal means had failed.

The POWDER was used in a liberal manner and ordered applied twice daily. In some cases it may be necessary to administer citrate of iron and quinine in order to hasten repair."

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Geo. E. Bahrenburg, M, D., Sawtelle, Calif., says:

I had a man come under my care with a bad carbuncle on his breast. In past experience the non-surgical treatment of carbuncles, has proven unsatisfactory to me. I was somewhat perplexed as to what course to pursue, when I struck upon the idea of using LIQUID CAMPHO-PHENIQUE I applied it full strength and was most agreeably surprised to find that after the second day, the sore had entirely disappeared, its progress arrested, and a clean, healthy wound remaining. I continued the same treatment, each day packing the large cavity with gauze, saturated with CAMPHO-PHENIQUE. After eight days I discharged the patient cured.

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The mention of these two species of mosquitoes was for the purpose of indicating that the mode of inoculation of yellow fever and malaria was precisely the same, and a careful reading of our statement will show that we had no intention to suggest that Tongaline was indicated in yellow fever, but on account of its pronounced eliminative action it did possess decided therapeutic value in the treatment of malaria.

We regret exceedingly that the notice referred to should have been misunderstood or misconstrued by anybody.

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Extract from article written by

JOHN K. CARSON, M. D.,
Los Angeles, Cal.

Published in California Medical & Surgical Reporter, March 1905.

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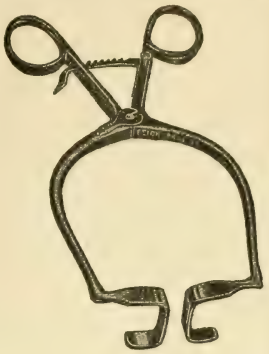

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Acute Syphilitic Meningitis.

H. Drouet has published in a These de Paris a description of a rather rare affection, and yet which is more frequent than is usually supposed. Prior to 1900, moreover, only two undoubted cases were known. Since that date the author has been able to collect six additional cases. It occurs preferentially in males from 18 to 40 years of age. The disease is ushered in by headache, vertigo, vomiting, neurasthenic troubles, and fever, which is sometimes high. Subsequently there is agitation or somnolence, epileptiform attacks or coma; above all, ocular and facial paralysis. Finally, there is lymphocytosis and hypertension of the encephalorachidean fluid. Sometimes its evolution is interrupted by alternations of amelioration and aggravation. It lasts, on an average, from twenty-five to thirty-five days.

The habitual termination is recovery, nearly always complete. Acute syphilitic meningitis is the least dangerous form of acute meningitis, and the most benign variety of cerebral syphilis. It yields readily to specific treatment. The prognosis is not serious in itself; the syphilitic back-ground remains, however, and return is possible.

The diagnosis is easy between syphilitic and tuberculous meningitis, as well as saturnine encephalopathy. In all these forms there is rachidian lymphocytosis. The sole rational treatment is specific and the course should be prolonged.—La Tribune Medicale.

Statistics of Venereal Disease.

It is notoriously difficult to obtain any trustworthy figures to show either the incidence or the mortality in any country of the venereal diseases. The Registrar-General's returns of mortality from syphilis cannot be relied on, for in but few cases of death ultimately due to this cause does the same appear on the death certificate. For instance, in Ireland, in the year 1903, out of 77,358 deaths registered, in only 104 is the cause given as syphilis, and in 14 as gonorrhea. The figures obviously bear no relation to the actual facts. With regard to the extent to which venereal diseases exist in the living population, it is just as difficult to form an estimate, and the estimates that have been made are more or less guesses depending on individual experiences. Sir William Gowers is reported to have given his opinion that there are half a million people in London alone who have contracted syphilis. There are said to be 150,000 syphilitics in Berlin, and 225,000 in New York, while in France one out of every seven people is said to have the disease. Figures based on admissions to the army can obviously not be taken as representative of the conditions of the general population, since in different countries the army is recruited from quite different classes of the population. Nevertheless, such figures are instructive, though they show a very wide variability, reaching the highest figures among British recruits and the lowest among German. Out of every 1,000 admitted to the following armies the rates for gonorrhea and syphilis were, respectively, Germany, 27 and 5.5; Russia, 36 and 13; France, 40 and 9; United States, 73 and 16.8, and Great Britain, 173 and 101. We still seem as far as ever from devising any practical means of preventing the spread of these diseases.—Medical Press.

Calculus of the Spleen.

At a meeting of the Medical Society of the Hospitals M. Henri Dufour reported the autopsy of a man who had been under treatment for chronic bronchitis and emphysema and who presented old tuberculous lesions of the lungs. There were also peculiar conditions in the spleen. That organ, which was not increased in size, had, at certain points of its parenchyma, hard nodosities, which could be easily removed. They were about the size of cherry stones and were surrounded by a very thick membrane. Their interior was constituted by lime salts. They were genuine stones in every respect similar to those of the lungs. The liver contained only one or two of these concretions and they were very small.

The speaker looked upon the stones as calcareous degenerations, probably of tuberculous origin, presenting themselves under an aspect which he had never witnessed in that organ.—La Tribune Medicale.

Modern Therapeutics and Pharmacy.

By Frederick Hadra, M. D., of San Antonio, Texas.

In speaking of ethical proprietaries, he says: "I should be sorry, indeed, if the prejudices of any member of this society should so far overcome his better judgment as to banish all or most of these drugs from his practice without investigating their merits. So, if we desire a local antiphlogistic effect, and have to choose between the ancient, un-

The Charlotte Medical Journal.

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Neurasthenia.*

By W. A. Plecker, M. D., Hampton, Va.

It is my desire to present in a brief paper, a review of some practical points upon an affection which has been termed an American disease, and which is becoming more and more prevalent as the years go by.

Our ancestors, though given to hard and continuous labor, but being comparatively free from the mental worry and competition of our faster mode of life, and living more in the open air, knew little or nothing of the condition of nervous exhaustion, or Neurasthenia, which enters largely as a factor into many conditions for which we are daily consulted.

It is true that hysterical affections were quite common then, and are found now, amongst individuals with less highly organized nervous systems.

We must not overlook the fact, however, that there is a condition of nerve tire or exhaustion, entirely distinct from hysteria, but just as real a disease as typhoid fever, and being of longer duration and more obscure, is a cause of even greater suffering to its victims, if not recognized and cured.

It is only during recent years, that more general recognition has been given to the pioneer work of Beard, Mitchell, and others.

Austin Flint, perhaps, first gave a text-book description of the condition in 1866, under the term Nervous Asthenia, which though short, was accurate.

European writers, particularly those of the continent, seeing it less frequently, were later in falling into line.

Physicians trained to look only for gross lesions, with such changes as may be recognized by palpation and a suscultation, with the aid of the microscope, and test-tube, are slow to realize that a true malady so potent for the production of suffering, may exist with no discernable organic change.

In many instances, we have little but the conduct and statements of the patient and friends to guide us. The first patient whom I saw with this affection, twenty years ago, struck the key-note to the attitude apt to be assumed toward such, when she greeted me with the words, "Well, doctor, I don't know what is the matter with me, unless I have hypo."

Dr. G. M. Beard early in his studies, divided the affection into Cerebrasthenia, (Brain Exhaustion) and Myelasthenia, (Spinal Exhaustion).

While this classification in the main holds good, one form or the other predominating, yet the two more frequently merge, making the treatment of the cases largely a matter of judgment and experience. The complete "rest-cure," which in properly selected cases of Myelasthenia produces such almost marvelous results, if applied in full to mild forms of pure brain exhaustion, may be a positive disadvantage, if long continued.

Symptoms.—In certain cases of the spinal form, the symptoms are so clear and pronounced, as to make the question of diagnosis an easy matter.

In other cases the symptoms and origin of the trouble may be so obscure as to make the study and management a difficult problem, calling for the highest power of reasoning of which the physician is capable.

Nothing in connection with a case should be deemed of trivial importance. Frequently the chance remark of patient or relative may give a clue to the underlying causes, which intentional or not, may have been kept obscured, and which it is necessary to know for proper treatment.

Rarely is a full history of the case brought out in one short interview, or by conference with the patient alone.

A Feeling of Complete or Partial Exhaustion is the most pronounced symptom. This may be so complete in the spinal form as to compel the patient to remain in bed. Others become exhausted after exercise to varying degrees, some with effort, doing a fair day's work, others being only able to walk across the room.

Tenderness of the scalp, along the spine, and in the lumbar region, with localized pain, is a most frequent system.

This condition is usually transient, peripheral, and varying in degree, but at times may be more constant. A lady consulted me during the writing of these pages, who attributed her backache entirely to "Kidney disease." It was only after a negative examination of the urine, and careful inquiry, that the origin of the symptoms, of which this was only one, was found to be a shock from the accidental death of a son, several years ago.

Sick headache, is a condition frequently present. A patient now in mind, who was relieved by treatment directed to the nervous system, found this the most pronounced of all her symptoms.

Dilatation or abnormal activity of the pupils, is frequently present. This has been noticed more particularly after fatigue. The

*Read before the Medical Society of Virginia during its thirty-sixth annual session, held at Norfolk, Va., October 24-27, 1905.

conjunctivae may be congested, and the eyes changed in expression.

The eyes are apt to suffer with the rest of the body, and to become irritable and painful.

A pronounced case of myelasthenia, cured by modified rest treatment, found it necessary to keep the room darkened, for this symptom alone. A slight error of refraction, not before known to exist, was corrected by the proper adjustment of glasses, but without marked relief, until the general conditions improved.

Insomnia, to varying degrees, is common, whilst *drowsiness* is present with others.

Nervous dyspepsia, is one of the early and pronounced symptoms of nervous breakdown, usually improving with the rest of the body. An instructive case of this nature, was treated recently at The Augusta Hotel, the patient being the sister of a physician from the mountain section of Pennsylvania, who came to Hampton for a change and rest near the coast. The dyspeptic symptoms were so marked, that all foods, including peptonized milk, gave great discomfort. Only malted milk, could be used with any degree of satisfaction, until the early morning washing of the stomach was begun. Immediately these symptoms cleared up, and she was able to take food in sufficient quantity.

Mental weakness, is usually marked, preventing any sustained effort at thinking or calculating, though able to perform a considerable amount of manual labor. Even ordinary conversation, light reading, or the transaction of simple routine business affairs, quickly fatigue.

Irritability, hopelessness, and fear, take the place of cheerfulness and content.

In certain cases the desire for *stimulants* and *narcotics*, transforms a man of exemplary habits, into an inebriate. Any inherited tendencies in this direction may assert themselves.

The *heart* suffers with the rest, being subject to irregularity and irritability. The pulse-rate is usually increased and variable. The cases which I have studied with the sphygmomanometer, show lowered blood-pressure.

Numerous other symptoms may arise, of which mention only may be made, such as *cramps, numbness, hyperaesthesia, susceptibility to weather changes, local itching, ticklishness, local areas of cold, flashes of heat, gaping and yawning.*

Weak functioning of the reproductive organs, is usually marked in both sexes. Several wives in referring to this subject, mention a positive repugnance to the exercise of marital relations, even before other symptoms were well developed.

The causes of Neurasthenia, should be known by physicians, and the effort made to remove or prevent them, before serious damage is done.

There may be a strong *hereditary tendency* to nervous weakness, which causes the individual to start in life handicapped. Yet this person, with a reasonable amount of care, realizing the danger of prolonged and worrying effort, may go through life as a useful member of the community, working in moderation.

The great *cause* of the acquired form is *continued and unremitting effort, coupled with worry and anxiety.* This effort may be manifold in its variety, from the mother with her household and natural cares, to the professional or business, man or woman, with anxiety as to success, and worry over details and results.

The whole matter may be summed up in the one term *worry*, no matter from what cause.

One of the most complete cases of spinal neurasthenia, was in a young lady of robust build, who applied herself too continuously at art-work, in which she became intensely interested. A similar case was in a schoolgirl, who for several successive years, had a partial breakdown, during the second half of the school year.

The most frequent *age* is from 15 to 50 or 60. A case is recorded in an infant, from too constant fondling and tossing, cured by being let alone.

Sudden shock as from *grief* or *fright*, or *disappointment* in *love*, may cause an immediate breakdown, or may start the patient on a downwnard road requiring years to reach the point when medical help is called in.

Sexual irregularities and *excesses* may induce the trouble in the nervously inclined.

An interesting case of hysteronenrasthenia is now under observation, in the person of a married lady, which for some time proved puzzling. She finally with reluctance stated her belief, that the trouble was induced and kept up, by the habit of her husband during a period of 10 or 12 years, of practicing interrupted intercourse, against her will, in order to avoid pregnancy.

Race.—In quite an extensive practice amongst the negro race, I have not met with a clear case of neurasthenia. Their proverbial freedom from care, and unwillingness to assume responsibility, relieves them of the great cause, *worry.* Hysterical affections, however, have always been common, and insanity, since they have obtained their freedom, is largely on the increase.

The *diagnosis* may usually be made, by a careful consideration of the history and symptoms. A full and careful examination should be made of all organs in every case, as frequently accompanying affections may

be found, which though not the chief cause, may serve to aggravate the nervous condition.

Fears are frequently entertained as to the existence of a serious disease of the heart, kidneys, or generative organs, whilst derangement of the digestive system, with constipation, will most likely exist to some extent.

Positive assertions, as to the absence of these and other organic affections, serve greatly to inspire confidence of the patient in the physician, and induce more ready compliance with his instructions.

Without this full confidence, treatment is an uphill business.

Hysteria may be distinguished by its more acute and violent onset and symptoms, with possibly convulsive tendencies, and history of previous attacks. The tendency of hysteria, is to more rapid recovery.

Organic diseases of the nervous system, usually present stable continuous symptoms, whilst those of neurasthenia, are transient and shifting.

Anaemia may coexist with neurasthenia, and frequently does, but the mistake must not be made, of supposing that treatment for anaemia alone, will cure all cases of nervous exhaustion.

Lithaemia.—We frequently see patients who give some symptoms of neurasthenia, whose condition is dependent upon overindulgence in the pleasures of the table, with lack of exercise, and a constipated habit. The tongue is furred, and uric acid is found in quantity in the urine. These patients are apt to be depressed and irritable, during an attack.

For such, the advice to eat less, especially of meat, take out-of-door exercise equivalent to a daily walk of five miles, abstain from alcoholics, and keep the bowels open, will if carried out, clear up the trouble.

It is a fact well known to physicians, that the majority of Americans, eat far too much, especially of meats.

Treatment.—In considering the question of treatment, judgment is necessary, to determine whether rest, or moderate work is indicated.

It is seldom a mistake to advise rest, or at least a change in the daily routine of life, for a brief period. On the other hand, the endeavor to spur the jaded, exhausted, nervous system to further effort, when complete rest is needed, can but be disastrous, and prolong the date of ultimate recovery.

In the severe forms of myelasthenia, the question is likely to be settled by the patient himself, whose inability to work, or at times, even to walk more than a few steps, forces him to observe quiet.

The mistake is frequently made by these patients, sometimes with the sanction of the medical adviser, of continuing to drag around, hoping that tonics will overcome the difficulty, until finally forced to the bed or couch.

Dr. Mitchell in developing his "rest cure," has done much for these patients. The full treatment, however, is difficult to carry out in the patient's home, but under favorable circumstances it can be done. My best results have been obtained in the case of those whom I received into a quiet portion of The Augusta Hotel, placing them under the care of a competent nurse, and having them constantly under direct supervision.

This treatment consists in:

1. *Absolute rest* in bed.

2. *Seclusion* from visitors, even members of the family, except under certain conditions.

3. *Forced feeding* with milk, eggs, and other wholesome food. In this connection I will mention the case of a young lady, who persisted in the belief that she could not take milk or eggs. Under the skillful management of the nurse she was in addition to other food, soon receiving nearly or quite two quarts of milk, and five or six eggs a day. Much of the milk and eggs were given in a frozen state greatly to the delight of the patient.

4. *General massage*, beginning with the feet and going up, paying special attention to the abdomen, particularly if constipation be present. This should be done daily, 30 to 60 minutes being consumed in each treatment.

5. *Electricity*, either Faradic, or Galvanic, as seems indicated, should be given in the same way, at a different hour, care being used not to shock the patient.

In the less severe cases, particularly of the cerebral form, this full treatment may be greatly modified. At times a rest from the ordinary routine of life, is chiefly needed. A lady with several children, found that the simple absence from her family for two or three weeks, once or twice a year, served to save her from a breakdown.

One class of patients is benefitted by travel, or a complete change of climate and environment, the same care being taken, to avoid over-fatigue in recreation and sight-seeing, as in work.

Patients from the interior, do well near the coast, and vice versa.

The *medical treatment* must be varied to meet the need of the individual patient.

In the nervously inclined, it is well in the beginning, to soothe excitement, and secure rest, with rather full doses of sod. brom. two or three times a day.

The *anaemic* cases call for *iron* in large doses. A good preparation of *malt* aids digestion and may be beneficially used

throughout. These may be combined, as in the preparation known as Neoferrum, though an additional amount of iron may be needed in the form of Blaud's pill or otherwise.

Time permits only, of the enumeration of other remedies, which may be used as indicated.

Ergot gives excellent results in congestion of the brain or spinal cord. *Arsenic* is of great value for its alterative effect.

Caffeine in large doses, is excellent for sick headache. *Cannabis indica*, is also recommended for the same condition, and for its effect on the nervous system.

Zinc preparations, the Bromide, Valerianate, Oxide, and Phosphide, are useful for their sedative effects.

Strychnia may be used later in the treatment, in combination. It should be watched, and omitted, if found depressing or exciting.

Muriatic acid, and other special treatment, for the improvement of digestion, are frequently indicated. *Washing* of the *stomach* in the early morning before food, as previously mentioned, will often be of signal advantage.

Fats in the form of cream and butter, should be taken freely. These may be augmented by the use of Cod Liver Oil alone or in emulsion.

Special remedies for the relief of pain or insomnia, are rarely needed.

I desire, however, to call attention to the excellent results to be obtained from *counter-irritation*, in the form of *small blisters*, for the relief of pain and tenderness along the spine, and in the lumbosacral region. I will cite a case given the complete rest cure, for six weeks, with most marked results, except that a couple of small points of pain and tenderness persisted in the back. Blisters an inch in diameter, made by spreading the ointment in the center of pieces of adhesive plaster, gave immediate and permanent relief. These were allowed to remain without attention until they came off.

Cold water rubs will be found of use in certain cases, but cannot be insisted upon in all. The nurse mentioned above, was herself cured some years ago of severe spinal neurasthenia, using cold baths and rest, after discontinuing electric treatment, on account of inconvenience, even at times breaking ice to get into the water. She considers this, at least of equal value with electricity, in securing muscular contraction, and for its tonic effect.

Alcoholism and its Relation to Insanity and the Proper Methods of Treatment.*

By E. O. Williamson, M. D., Gurley, Ala.

*Read before the Tennessee Valley Medical Association, Oct. 12-13, Decatur, Ala., by Dr. E. O. Williamson, Gurley, Ala.

There is no disease of the mind and body which is so widely spread and so rapidly increasing at the present time as the series of toxic phenomina exhibited in those persons who are addicted to alcoholic stimulation. There is no other form of poison that so completely changes and degrades nerve and brain tissue as alcohol; it rapidly and surely disturbs mental functions, while dhysically it degrades the human tissue and cellular structure, degenerating the bodily texture, undermining the vital organs and transfers a host of abnormalities such as moral, mental and physical defects to the future generations; probably attributing more to the survival of the unfittest, than all other vices that humanity is heir to, induced in our ancestry by imbibing of alcoholic stimulants.

We will now in the consideration of this subject, divide it into two groups; the study of one group necessitates the cause of the other. First group consists of the effect of drinking alcohol and its derivatives upon the body and brain, producing effects on tissue, organ and function. The second group is the effect of the first producing a pathological condition by which man's whole nature and cell structure is changed and he only remains himself in hame, producing that condition of mind and body which imdels them to take a drink; a condition that I shall call alcoholic insanity. The former group of symptoms are produced by the anaesthetic effect of alcohol. It vitiates pain by obtunding the sensory nerves producing its pain, relieving effects solely from its anesthetic effect upon nerve and brain tissue, having the property of setting ud a desire for a fresh dose and at the same time of so disturbing brain and nerve functions, inducing moral and mental perversion, it being the most prolific indirect cause of breaches of divine and human law from the least frivolous to the most heinous crimes known to man.

Until about one century ago when Benjamin Rush laid down the law that habitual drunkards were diseased persons, who ho dot drink because of a mere habit but that they are diseased both in mind and body. Excedt in rare cases drunkenness was considered a voluntary act, entirely controlled by the will of man; that men and women could get intoxicated and get sober at will, that drunkenness was nothing more than a pasttime for those who indulge and man could quit and commence as he willed or as it suited him best. Hence we find those diseased persons who frequently get intoxicated denounced in the pulpit by ignorant but well-meaning clergymen for doing such a sinful and wilful act, when as a matter of fact the poor man or woman has an induring disease beyond the hope of

moral lectures and pulpit denouncing to cure. We also find that men were subjected to imprisonment and fines and also subject to the scourage. Who would think of dunishment for being sick with pneumonia or typhoid fever? The idea is horrible to contemplate these diseases are no more of a disease than chronic drunkenness, but thanks to the doctors of the world who have done more than all other professions from a standpoint of philanthrody, this snbject is being brought down to a reasonable, sensible, scientific basis, and in the near future great good will come to the world in the right, intellight and scientific knowledge, correcting the pathological and disease condition and looking more to the disease than to the sinful act of drinking. This broed and far-reaching subject frought with so much danger to the body politic and society and the upbuilding and prolongation of the physical, mental and moral nature, will be solved by the correct knowledge of this form of insanity, then we will recognize that what sometimes starts with a habit by its diseased effects upon brain and nerve tissue, produces a form of insanity as surely as does brain softening.

I shall now divsde my paper for further study into drunkenness and inebriety. Inebriety is simply nothing more than the dathological and diseased effects of drunkenness frequently redeated, continued from time to time, from year to year until man simply succumbs to its benumbing effect, no will-power to resist, the balance-wheel of life lost, that of moderation; until the man is nothing more than a diseased person which we call inebriety. Now I shall take up that form of insanity known as acute alcoholic insanity. This pathologicel condition rarely attacks inebriates for the inebriate's cellular structure is so changed by constant imbibing as to make it respond slowly to the wild condition of acute alcoholic insanity. The attack is usually ushered in without warning or prodromes. The seizures which resemble an epileptic attack occurs usually in a very short time after ingestion of a good dose of alcoholic stimulant by those who have periods of repose between their outbursts. The individual is usually thrown into a maniacal violence. There may be a complete unconsciousness of the individual's surrounding, the fury of the individual is entirely beyond his own control, and he may do acts of violence to himself or to his fellowman and be totally unconscious of his vicious habits, and I hode and believe the time will come as it surely will arrive when our courts and judges will make due allowance for the acts and crimes of these diseased dersons for which the stato and government are partially to blame for, in allowing the indiscriminate sale and use of a beverage that runs men crazy, makes them an enemy to the stato and society at large. Justice demands that no man be convicted of a crime for which he is not accountable for; also justice to society demands that no man should be hurt or injured by an insane individual. You sometimes find that this form of acute alcoholic insanity assumes the form of bulldog pugnacity, the insane individual spoiling for a fight exhausting himself by pounding his wife, throwing the household goods out of the house or battering down, as he thinks in his depraved mental state, a stone wall.

We shall now rapidly pass on to that part of my paper more appropriate to my subject, that of chronic alcoholism, that form that is produced by constant imbibing from day to day until man has produced upon himself a form of enduring insanity. To the ordinary layman an intoxicated person appears to be a man beyond his own control. bereft of reason and judgment, but to the skillful and intelligent physician and observer something more is seen than the mental aberration, the staggering gait are as plainly indicative of the diseased sttae as the pulse beat indicates the heart beat. When these acts of intoxication are repeated constantly the brain at first irritated, then inflames, thus impairing organic and functional vigor, and finally destroys structure. Alcohol alters the chemical composition of the blood, diminishes its power of carrying oxygen, lessens its corpuscular activity. The blood is also interfered with by failure of elimination of waste products, the retention of this waste product makes our blood from which our sources of bodily revenue are obtained less able to construct loss of structure and repair diseased processes. All of this perversion acts upon the cellular structure by impairing and weakening our cell structure, causing cell degradation, The peculiar affinity of alcohol for brain and nerve tissue when once one is addicted to the habit of drink, probably explains why the craving desire for drunkenness is so manifest. The impulse to drink involves the highest nervs centers affecting first the most delicate intellectual processes as it dims perception and plunts sensation.

The first effect of alcoholic drunkenness is to impair the inhibitory functions, resulting in a vasa motor paralysis. Alcohol is a powerful waster of inhibitory force, that force so necessary for any individual to control themselves, which renders the subject powerless to resist the slightest temptation to drink. It so impairs the will power that man is no more than a child in its despotic embrace; when at the same time producing by its anesthetic effect

acraving intense for its own peculiar effect, acting in a twofold way, preventing man man from exercising his own will-power so necessary, at the same time increasing the desire for drink, and I regeat, that the greater affinity of alcohol for nerve tissue. The brain is the first organ to suffer, the alcohol stimulants conveyed to the brain by the vessels that supply meningeal membranes, by the paralysis of the vasr motor nerves, control over the vessel are lost, they relax causing them to dilate, and as a consequence an increased flow of blood to the brain, resulting of course in a temporary mental excitement; this increased supply of blood cannot be sent back from the brain, hence we have arterial congestion being replaced by a venous congestion, a block in the circulation ensues which is followed by a period of depression of the coma. When this process is frequently repeated, tissue changes take place which alters the cellular structure of the brain, the membraneous covering of the brain are thickened and congested and the brain does not in this condition and depraved state get the necessary nourishment to reture to the normal. The egect of all chronic inflammation and irritation is to render the connective tissue of our body more easily to take on an extra growth it proliferates, hence we find the connective tissue in which are imbedded the brain cells increases and takes on new growth at the expense of our brain cells, crowding out the brain cells and following its own peculiar law to contract, finally contrdcts down and destroys the nutrition of our cells in the brain, the nerve cells deriving their nutrition from the small vessels that form a network in the connective tissue stroma surrounding our cells in the brain. Hence we find the brain cells blood supply disturbed and finally a necrotic process sets in, first loss of vitality, hence brain softening sometimes follows the pathological process, and as a consequence of this depraved state loss of mental and also loss of function of the brain, we then have the brain cells necrosed replaced by connective tissue and we have what we know as hardening or cirrkosis of the brain. Of course we can only have one effect following the replacing of brain tissue by connecting tissue, the impairment of intellectual and moral functions, perception blurred, intelligence clouded, sensation dulled, then the man physically and morally is certainly a new creature, that instead of the survival of the fittest we have the survival of the unfittest that transfers its own peculiar vices to further disturb the wellbeing and happiness of another generation In this depraved state, or rather this peculiar state of insanity, the drinker neither feels nor suspects but what everything is all right with him, totally unconscious of danger though he is drinking himself to death and to complete annihilation.

While under this anaesthetic and benumbing dose he feels no ache or pain, though was he in his right senses he would be rolling in pain. He goes on in this condition of body and mind, totally ignorant of his degeneration, or if he sees them at all, he not being fully sane, they make no impression upon his clouded and confused intellect and his perverted nature. He can neither in this state comprehend the good nor the evil, he cannot even judge the force of a blow that would kill his fellowman, but would only think he was giving his friend a friendly shove- He does not see things as they actually exist, hence he may be given to common lying and honestly think he is telling the truth. This series of abnormal and retrograde alteration from the normal which may be either inherited or acquired, are all of them practically symptoms of cerebral, mental and moral aberrations which renders the individual in such an insane state as not to have the power to acquire accurate knowledge. To acquire accurate knowledge all the faculties of mind and body should be complete and at the normal standard, hence the chronic drunkard not being in possession of this normal state ot mind and body, his brain not capable of interpreting the right from the wrong, hence the drunkard may commit crime from the least to the most heinous and commit it all unconsciously of wrong doing. Then it would be quite dangerous to allow them to roam at liberty, would it not?

A chronic drunkard whose whole nervous system is thus paralyzed either partially or wholly is nothing more than an insane person. He can neither reason, judge nor discriminate. The effect of this dreadful poison is such upon the system that there is no disease of mind or body that cannot be traced directly or indirectly to its pathological and blighting effect. This constitutional modifying of nerve and brain cells as well as the deterioration of bodily function and infirmities is so assimulated and so modified that the man's moral and physical structure is changed and this peculiar modification which we term diathesis can be and is frequently transmitted to still further undermine the human race, and this is quite a preblem that will have to be solved by our statesmen, men of science and those who love the government. This propagation of the species from like to like is now an established fact, and alcohol so changes and degrades tissue that ere long the blue blood of some of our proud ancestors will have run out and we will have those in the world that are mentally and physically

bound down to vices that will shake the foundation of this free government, besides the vice crimes idiocy and insanity will largely increase.

Now having given you some of my reasons for my belief that chronic drunkenness is a form of insanity, and is distinctly a disease, how what should be done to drotect society from the acts of these insane persons? If a man becomes insane from any other cause he is confined in an asylum for treatment or to keep him from harming other people. So it stands to reason that some place of confinement for treatment of the chronic drunkard is absolutely needed. If man ever needed some one to look after his mental and physical condition it is surely the chronic drunkard, hence I think the state legislative body of Alabama should pass a law to confine the chronic drunkard in the insane asylum for treatment, for this important and far-reaching disease, and I think the time not far distant when men of intelligence, both physicians and the clergy, wil unite in one appeal to have the state to do something for a disease that is doing more damage to the state of society and humanity in general than nll other things combined, and I would state that the state of Iowa has already such a law that the supreme court has declared constitutional and it has resulted in an incalculable amount of good. In the solution of this great problem I think the doctors will have to take a leading part.

Now to give you a summary of my paper I will submit some brief points: (1st.) That chronic drunkenness is a disease either inherited or acquired and cannot be cured excedt by legislative action by confinement in an asylum. (2) That acute alcoholic insanity is also a disease, that the law of the country should not condemn a man for deeds done while insane, especially when the government, state, county anp corporate bodies allow drugs to be sold that cause insanity. (3) That the survival of the fittest and upbuilding and prolonging of the human race, moral, mental and physical, the indiscriminate sale of alcoholic stimulants will have to be stopped. (4) That in this great fight the doctors will have to take a leading dart, for drunkenness is a diseese as well as a sin.

The Treatment of Corneal Ulcers by the General Practitioner.*

By Clarence Porter Jones, M. D., Newport News, Va., Member Medical Society of Virginia, Oculist and Aurist to several Hospitals, &c.

Having recently treated twenty-two cases of ulcer of the cornea, all successfull; and to have had the misfortune to have three cases coming from the country districts—each with a blind eye—as a sequel to corneal ulcer, I feel constrained to say a few words about the treatment of these cases by the General Practitioner.

It is not the purpose of this little paper to in any sense discourage the practitioner in sending his cases to a competent oculist, which is his highly important duty. There is no disease of the human body which requires more skill and judgment in treating than this malady; but there often occurs cases of ulcer of the cornea in the practice of a physician, especially in the country, which, for financial or other reasons, cannot go to consult an oculist. These cases, and only these, should the physician undertake the responsibility of treating.

The cornea is a non-vascular structure, nourished by lymph osmosis from the lymph spaces in the conjunctive and sclera, which lie in juxtaposition to its own. Thus we see it is feebly resistant to infection.

Upon careful inquiry, we find a vast majority of ulcers are due to an injury or abrasion which has become infected, either at the time of injury or subsequently thereto. It is to the method of cure of this ulcer we discuss.

Destruction of the corneal substance is the essential feature of all forms of suppurative keratitis, leaving an opaque cicatrix, at best on healing, or by perforation involve the whole eyeball, resulting in phthisis bulbi, and total loss of vision.

As before stated, an ulcer begins with a focus of infection, superficially situated, with ragged edges of a yellow color, being surrounded by a zone of infilteration. Its sides and bottom are covered by a detritus of a pultacious appearance. Conjunctival congestion, photophobia, lachrymation, and pain varying greatly with individual cases is present.

Treatment should be both preventative and therapeutic. While I do not claim anything new in the line of treatment I follow, yet I think I am justified in presenting it, as it has proven itself to be the very best in my hands after hard and persistent efforts.

Every injury of the cornea should be assumed to be infected. The eye should be promptly irrigated with a saturated solution of boric acid, or bichloride of mercury solution one to four thousand, and kept as nearly aseptic as is possible to so do by use of a bichloride and salt ointment containing bichloride of mercury one-fifth grain and sodium chloride one grain to vaseline one ounce. If pain is a factor, I add five grains of cocain, allowing the druggist to use a small quantity of liquid albolene to better enable the cocain to dissolve. If the injury is as much as 12 hours old, and the proper

*Read before the Medical Society of Virginia.

antiseptic precautions have not been taken, I touch the wound with tincture of iodine applied by a few shreds of absorbent cotton wound around a small probe or smooth wooden toothpick. All applications to the cornea being painful, a previous installation of a six per cent. solution of cocain should be made.

When the ulcer has declared itself, my first procedure is to curette thoroughly with a small size Meyhoefer's corneal curette, then touch with tincture of iodine. If after twenty-four hours there is no marked improvement, cauterization, either with carbolic acid after the same manner as the application of iodine, or the actual cautery should be thoroughly done. For the latter, the suitable instrument being Gruening's cautery probe. These two instruments are very inexpensive and should be in the office of every country doctor. Atropine sulphate one per cent. should be instilled every four hours for the first day, thence twice a day. Hot applications, boric acid a teaspoonful to a pint of water as hot as can be borne every hour, bathing the eye for ten minutes at a time, are very beneficial. A shade or smoked glass may be worn to shield the eye from light.

The cauterization may be repeated in two or three days, if necessary; often one application suffices. In bad cases and especially highly nervous patients, rest in bed in a dark room and a nutritious diet is imperative. Pain is usually relieved by the application of the vaseline preparation with cocain above referred to. This can be augmented by codeine by the mouth or hyperdermically. The curette is highly important as it removes tissue which would otherwise slough away were it not used; therefore causing no more scar than would otherwise result. Then, too, by its removal of the detritus, the iodine and other antiseptics are enabled to have a clear field of action.

The line of treatment here laid down caused prompt results in the twenty-two cases mentioned at the beginning of this paper. Each case was preceded by an abrasion or injury, scarcely any two from the same source.

I will report three cases seen by me from five to twenty weeks after the initial abrasion which had not had treatment.

Case I.—Mary S., aged 13; was hit in the eye by a briar twig while picking berries. Pain and discomfort being so slight, little attention was paid to it for the time being. Four days later, she saw her family physician, who lives six miles from her home. She had a well defined ulcer a little larger than a pin head on the upper outer margin of the cornea. The doctor told her father this and also the danger there was to loss of the eye and insisted that an oculist be seen as quickly as possible. For financial reasons this was impossible (the nearest oculist being fifty miles away) whereupon the doctor prescribed a boric acid wash and told her to report back in a few days. Eight days later, the cornea had perforated, the lens presenting panophtholmitis with destruction of sight. About four weeks later while spending my vacation in her vicinity I encleated the eye on account of sympathetic trouble in its fellow, it being permanently damaged.

Case II.—Arthur B., a colored youth, was struck in the eye last Christmas by the seeds of a toy torpedo (not a burn). Pain was slight. Next day a small oval abrasion was seen in the center of the cornea. Two days later he consulted his family physician to obtain relief from pain. At this time an oval superficial ulcer, the size of a grain of wheat covering the site of injury was present. The doctor prescribed a poultice of meal bran to the eye. A virulent auppurative keratitis followed which destroyed over half the thickness of the cornea though not perforating it. Four months later, this physician sent the case to me. An enormous staphyloma had developed, the eye very painful, and was totally blind.

There was photophobia, excessive lachrymation, and some congestion in the fellow eye. I promptly enucleated the destroyed eye.

Case III.—Ephraim W., age 30 years, was struck in the eye by a bundle of wheat while feeding a threshing machine. There was sharp pain for a couple of hours, then comparative relief. About three days later his physician diagnosed a creeping ulcer covering the lower inner quadrant of the cornea. He was promptly told of his danger and advised to go at once to a neighboring oculist; he could not do so on account of sickness in his family. His doctor gave him a bichloride of mercury wash and a solution of eserine to instill. The case went from bad to worse, speedily developing hypopyon, plastic iritis, occluded pupil, blindness, and later strophy of the ball. Two months later I removed the eye to relieve excessive pain.

A sad picture this! Here are three eyes lost from want of proper, though simple, treatment. The chances are greatly in favor that each doctor could have saved his case. In each case an oculist was out of the question; then it was the duty of the physician to have done the best in his power. In such cases should he follow the old, though simple, treatment as mentioned here, the chances are that good results can be accompiished. Cocain and atropine solutions should be made up in a bichloride of mercury one to three thousand vehicle, to which may be added one grain of sodium

chloride. If some antiseptic vehicle is not used, they will deteriorate and give uncertain results.

My observation of the treatment of corneal ulcers in the great clinics of America and Europe will bear out all assertions here made.

In conclusion, I will state:

1st. All abrasions of the cornea, however slight, should be assumed to be infected and treated antiseptically, using iodine if the injury is twelve hours old.

2nd. That it is the imperative duty that a physician send his corneal ulcers, on account of the danger of destruction to eyesight, to an oculist of merit as quickly as possible.

3rd. That should there be any reason which forbids this, it is his urgent duty to treat the case as vigorously as if it were a case of opthalmia neonatorium.

4th. That in emergency the physician should use the corneal curette freely, and feel that the sin of ommission is four-fold to the sin of commission.

I thank you for your patience.

CLARENCE PORTER JONES, M. D.

Sub-Normal Temperature in Typhoid Fever.

By W. L. May, M. D., Sayre, Ala.

In this paper I shall not take up your time in the discussion of symptoms, etiology, etc., of this well known and time worn subject. Some time since I was in consultation with a physician regarding a case of typhoid fever with a low temperature. Up until that time I had not seen a case. In this form of fever the thermogenetic centers, so to speak, of the brain seems to be lost, or in a state of paresis. I am not more able to bring to the minds of the profession the peculiarity of the condition than to give in outline my first and only case. The case was Mr. H., a man 57 years old. He was of a tall somewhat slim nature, though was considered a strong character, had an occasional "heart spell" with which he would fall and remain unconscious for a moment and would be rational at once. I was first called Aug. 19th, 1905. I found the man with fever 102 degrees F., bowels sore, and somewhat tympanitic, tongue with white fur, red borders, had been unwell for a week, no appetite. Diagnosed probable typhoid fever.

Aug. 20th I called again, found temperature 105½ degrees F. My patient was very delirious, so much so that he got out of bed against my orders, and stated that he was going into an adjoining room to defecate. At this time his bowels were loose and sore. He walked a few steps with the assistance of a man on one side. He suddenly gave way, became unconscious, was placed upon bed; whiskey and strychnine given with cold water on the face revived him. Patient was delirious at this time, was very sore across the whole abdomen. Diagnosis now was made of typhoid fever. I placed him on my treatment for this fever, with the suggestion of cold water only, as an antipyretic.

Aug. 21, visit 8:30 a. m., temperature 100½ degrees F., bowels sore over McBurneyo point, some tympanites, diarrhœa, patient was delirious, diaphousis present, tongue dry.

Aug. 22, 8:30 a. m., found my patient's temperature normal, tongue dry and red, bowels loose, eruption on abdomen with swelling; left with my patient a thermometer and had fever recorded every two hours during day, temperature never was found above natural during day.

My next visit, Aug. 23, 8:30 a. m., found temperature 97 per rectum, all other symptoms about same as recorded on the previous day.

Aug. 24, temperature recorded every 2 or 3 hours, and in the afternoon it was found to register 103 1-5 degrees F. once. So on this date we found our last fever. A sponge bath brought it down to 100, and after this every single symptom of typhoid fever was present with the exception of the temperature, and the chart will show that the fever and pulse was low after the first 6 days, and 95 degrees F. was frequently recorded. About a week before I dismissed my patient it seemed as though he would surely die. My morning visit found patient very delirious, abdomen tense, extremities cold and blue to elbows and knees, and it certainly seemed that the heart would soon fail, fever 95 degrees, pulse 60, resp. 20, increased the heart stimulants, and in six hours he was alright. The next morning he had another attack which, however, was not so bad, disappearing in four hours. After this his bowels became better, tongue was becoming moist, delirium was giving way and quiet sleep taking its place, temperature was gradually rising nearer the normal mark, as you must remember the temperature was sub-normal in this case for four weeks.

Four weeks from the day of my first visit I conditionally dismissed him, but called one week after this visit, found my patient quite rational, hungry, bowels rather loose, but think it was due to diet, as they had fed him some vegetables against my orders. At the present writing my patient cannot sit up all day, but it is plain that he will recover, unless some other complication comes up.

Our literature and text books speak so little upon the subject is the reason I have

Patient Mr. H. Age 57.

Dignosis Typhoid Fever.

Date	Time.	Temp.	Pulse.	Resp.	Condition Mind and Body.	Nourishment, Med, and Condition of Stomach.
Aug. 19	8.0 AM	102	96	21	Good B. Swolien	No appetite, headache
,, 20	5.30 PM	105½	120	24	Bowels loose tympts	" " delirious
,, 21	830. AM	100½	86	18	Bowels loose tender	Delirious, milk and soup
,, 22	830. AM	98½	70			Milk and ice taken
,, 23	830. AM	97	66	16	Bowels loose delerm	
,, 24	830. AM	103½	68	15	,, Sore, Delerim	Milk taken, soup
,, 25	7.00 AM	95,45	60	18	" Loose delir'm	Nourishment and Med. taken
,, 26	5.00 PM	97	62	18	,, ,, ,,	Whiskey and milk taken
,, 27	830. AM	96½	60		', Sore, constip	Gave 2 doses Phos. Soda
,, 28	830. AM	95	66	16	,, 3 times swollen	" " " "
,, 29	5.00 PM	96	60		" 8 " Tympa.	Gave turpentine and opium
,, 30	830. AM	95 15	66	16	" 5 " "	Milk and medicine taken
,, 31	830. AM	95 45	66	18	" 5 to 6 times	Milk and whiskey and eggs
Sept 1	830. AM	97	60		Delir. Bowels Tym.	Milk and whiskey
,, 2	5.00 PM	95½	60	16	" " "	Eggnog and strych. pushed
,, 3	9.00 AM	97	60	18	" Sleeps well	" " " "
,, 4	10. AM	95 15	62	18	" Sleeps well	" " " Med. taken
,, 5	830. AM	96	62	16	Hands cold, heart int	Whiskey and strychnine
,, 6	830. AM	95	60	16	" " " "	Prognosis bad
,, 7	830. AM	95 15	60	18	Delir. and sleeping	Can take milk
,, 8	830. AM	96½	60	17	" " "	Nourishment O. K.
,, 9	8.30 AM	97	66	16	Sl'ping, mind better	Milk, whiskey and strychnine
,, 10	7.00 AM	97	68		Delir'm disappear'g	Milk and eggnog
,, 11	8.00 AM	97 15	60	18	Mind better	Milk and whiskey
,, 12	5.00 PM	98	66		" better	Nourishment pushed
,, 13	5.00 PM	97	66	16	Bowels loose	" "
,, 14	5.00 PM	98	68	18	Mind clear	" Eggnog "
,, 15	7.00 AM	96	66	18	" somewhat cl'dy	" " " "
,, 17	830. AM	97½	62	18	Condition better	" " " "
,, 18		98	68	16	Hungry, t'gue moist	" " "
,, 24	4.00 PM	97½	68	18	" tongue moist	Dismissed

for submitting this paper, and it is certainly a fact that there are cases in which a diagnosis is masked by so many symptoms being absent, and by complications being present, but it is seldom that we meet with sub-normal temperature. I wish to give to the professional men, who have honored me by reading this paper, the treatment that I use in typhoid fever. It is nothing new, but possibly combined in a different way. I have practiced medicine eight years and have not yet had a death where this treatment was used. I place them upon the following prescription:

R

Salol	3 ii ss
Acacia pulv.	3 ii ss
Creosote Beuhmosk	3 i ss
Tr. Strophantus	3 ii ss
Elixer Pepsin Co. qs	3 iv

Sig Teaspoonful in water with strychnine sulph. 1-30 (tablet) every 4 hours. In addition to this I suggest gtts X spirits turpentine and Bismuth Submit 3 ss to be given every 6 hours.

Now when you find too much gas in abdomen use hot stupes (turpentine). You have my treatment. I think that we should use strychnine and straphautus in full doses in this condition. I suggest plenty of cool sweet milk, egg water, eggnog, lemonade, and give baked apples when there are no complications. I push nourishment and supportive medicines the last week of sickness. I have a large country practice and have a good chance to observe climate, etc. I think out in the country air is a place that is best to test this prolonged type of fever.

Of course in outlining my treatment of typhoid fever above I did not provide for complication and sequela. If hemorrhage occur I still the bowels with opium given with sugar or milk, cold pack placed over the abdomen, quiet room. Pneumonia is

one of the most fatal complications with which we have to deal in this fever. I was in consultation with a physician near here this spring in two cases of this complication. Both of them died.

But back to my subject. The question is, How is it that we ever find a sub-normal temperature in typhoid fever? I can answer only in one way, namely: That the circulation is so charged with the ptomaine and effects of the bacilli typhosus that the heat forming centers in the brain are destroyed.

Thanking you for your kind indulgence I will conclude.

Note.—Oct. 20. The case at present seems to be hopeless. Patient has ascites with general anasarca. Aortic Stenosis and an atropic condition of liver, mind clear. Dropsy occurred ten days ago.

Varicose Ulcers of the Leg and Their Treatment.

By C. R. Lesnett, M. D., Fairlie, Texas.

One of the most serious troubles which has arisen in my practice has been to find a satisfactory treatment for varicose ulcers, known in southern vernacular as "set-fasts."

These ulcers are always very refractory to treatment. Situated as they are on the anterior aspect of the leg where the normal circulation is poor at best, it is very difficult to re-establish and maintain the necessary nutritive functions. When the physician is confronted by one of these circular or oblong ulcers with indurated livid edges, the entire area secreting a foul smelling pus, with perhaps a peripheral ring of exuberant granulations, he has to deal with one of the most difficult situations presented to him in the course of his daily work.

I am free to say that to my mind the older methods of treatment of such conditions were at best very unsatisfactory, both to the patient and myself. In spite of all the antiseptics, emollients and astringents, wet method and dry method, the case was most likely to drag along indefinitely.

To one who sees a considerable number of these cases it is really astonishing, or, perhaps, I should say surprising, to note the change that has been wrought in the treatment of leg ulcers by one agent—Antiphlogistine. For illustration allow me to narrate the plan pursued in one case in the Spring of 1904.

Mr. B. S.; aged 22 years, was considerably run down and anemic. Three years before he had a sore on the left leg which was a "long time" in healing. Upon inspection I found on the anterior aspect of the same leg a typical ulcer, 2½ inches by 1½ inches in size. The surrounding wall was indurated, extremely red and slightly inverted and the entire leg was œdematous. The ulcer had penetrated to the periosteum and was filled with pus, through which projected a number of red, tender elevations, resembling papillae. The patient informed me that he first noticed this ulcer six weeks before calling upon me. I immediately cleansed this with warm bi-chloride douches and touched the granular masses on the floor of the ulcer with nitrate of silver. I then applied a liberal amount of Antiphlogistine, thick and as warm as the patient could bear comfortably, over a considerable part of the lower leg, fairly burying the ulcer in Antiphlogistine. A layer of absorbent cotton was placed over all—in this case to increase resiliency—and a snug roller bandage was then put in place so as to give the parts the support which is absolutely essential in the proper treatment of chronic leg ulcers. The patient was directed to keep this leg in a horizontal position.

The next day, upon the removal of the dressing, the parts were antiseptically cleansed and the granulations were again touched with the nitrate of silver, icthyol was lightly applied to the thick hard skin around the ulcer and Antiphlogistine was applied as before. The next day there was considerable improvement; the skin on the edges had softened and the color improved. There was an entire absence of pus and the œdema was markedly less. After cleansing with the bi-chloride solution, a little icthyol was used and Antiphlogistine applied as before. From this time on the improvement was very gratifying. The icthyol was dropped and the Antiphlogistine dressings continued. Within six days from the first application of Antiphlogistine the œdema had permanently disappeared and healthy granulations sprung up throughout the entire seat of the ulcer.

On the 27th day after beginning treatment the ulcer was entirely healed and since that time there has been no recurrence.

It is always necessary to have patients who have recovered from chronic leg ulcers wear an elastic stocking so that the parts may be continually supported.

Some Points in the Diagnosis of Joint Diseases.

Williams in the Yale Med. Jour. says that the general practitioner never fails to examine the joint. Note whether it is swollen or thickened or if there is stiffness, muscular spasm, or actual limitation of motion. Compare it with a similar joint. Examine the patient—his history and general condition often give more light than the condition and history of the joint.

Tuberculosis.—The one characteristic and unfailing sign of beginning tuberculosis of a joint is muscular spasm—that is, involun-

tary resistance to passive motion of the joint.

If we have a child that has been limping slightly for a few days, we should think of hip disease. Lay child, entirely naked, on its back on a hard table, and fully extending the well leg, abduct and adduct it. Then flex the thigh on the hip as far as you can, and while it is in that position rotate the leg outward. Repeat these motions with the affected leg, comparing the degree of motion on one side with that of the other. Then lay the child face downward and hyperextend each leg in turn. If some one of these movements, generally first in abduction or rotation, you get a sense of resistance, a tightening of the muscles, if you are unable to move it as far as the other leg—then it is tuberculosis. If, in addition, you find a slight thickening over the trochanter and the child limps, you can be sure that you have a tuberculosis of the hip joint. Synovitis—low grade inflammation of the synovial membrane of a joint is here meant —may be recognized in the dry form by a peculiar creaking and crackling on palpation.

Infectious joints are characterized by a more or less sudden onset and by fever, with swelling, heat, redness, and pain in the joints.

Rheumatic joints cover several conditions. Rheumatoid arthritis is a slow process which begins with a thickening of the synovial membrane of the joint. The other is hypertrophic arthritis, or asteoarthritis, and consists of slow, irregular, outgrowths of cartilage and bone around the joint. The former is apt to occur in those who are in a poor physical condition, it usually involves a number of joints in succession, there is a swelling of the joint with a thickening of the membranes—often fluid in the joint. The latter, hypertrophic arthritis, is likely to remain for a long time confined to one joint, there is no fluid in the joint nor any great amount of swelling—after a time exostoses can be felt.

Movable Kidney, Treatment Of.

Newman, in the Glasgow Medical Journal, says that nephrorrhaphy should not be recommended in cases in which the symptoms referable to the mobility of the kidney are a small part of the trouble. In movable kidney complicated by enteroptosis an operation should be recommended unless it can be shown that serious symptoms are directly due to the displacement of the kidney. If movable kidney is associated with a nervous temperament, palliative measures should be exhausted before an operation is suggested. If dyspepsia, constipation, uterine or ovarian disease, or chronic disease of the kidney have long coexisted with the mobility, nephrorrhaphy should not be performed. If the displacement does not cause much discomfort or functional disturbance, nephrorrhaphy should not be recommended.

Nephrorrhaphy should be recommended in uncomplicated cases in which the pain is distinctly renal, and in which there are definite renal cases; if there is evidence of twisting of the pedicle as shown by paroxysmal renal pain, and albumin, pus, blood, or tube casts in the urine; if gastrointestinal symptoms are prononnced while the patient is active, but are relieved during periods of rest.

Repeated Durencephalic Births.

Rorie, in The Caledonian Medical Journal, reports the case of a 40-year-old miner's wife who had been nine and one-half years married, and had been pregnant eight times during that period. Three of the pregnancies resulted in the birth of a durencephalic fetus, two being males and one female. November 18, 1895, she was delivered at full term of a male child, pregnancy normal; child still alive and healthy. February 26, 1897, she was delivered at full term of a male durencephalic fetus. During the pregnancy she was unduly swelled in comparison with her previous pregnancy, and had severe lancinating pain on both sides of the abdomen during the last three months. There was marked hydramnios, and labor was precipitate. The child survived birth fifteen minutes. Ten days after birth she was seized with a severe flooding. June 9, 1898, she was delivered at full term of a female durencephalic fetus, which survived birth for five minutes. The labor and pregnancy were similar to that in the previous case. November 26, 1900, she she was delivered of a full-term male child; still alive and healthy. During the pregnancy she was kept under aletris farinosa. The pregnancy and labor were normal. February 9, 1901, she was delivered of a male durencephalic fetus at full term, pregnancy and labor being similar to those in the previous cases. The pain of the latter months was much more severe. February 6, 1903, she was delivered of a full-term female child; still alive and healthy. Throughout the pregnancy she took aletris. August 3, 1904, she aborted at the fourth month, with a fetus presenting the usual signs of this period of development. She is again pregnant. The three surviving children are in every way healthy and well developed for their age.

Charlotte Medical Journal

EDWARD C. REGISTER, M. D., Editor.

No. 36 South Tryon Street, - - - -

- - - - - - - - - - Charlotte, N. C

YELLOW FEVER.

This disease prevails epidemically in the West Indies and in certain sections of the Spanish Main. From these regions it is occasionally brought to the United States and prevails epidemically in the Southern States, usually gaining admission at some one of the sea port towns or cities. In the latter part of the last century and the beginning of this, terrible epidemics prevailed in Philadelphia and other northern cities. The epidemic of 1793 in Philadelphia was the most serious that ever visited any city of the middle states. This is most graphically described by Matthew Carey. The mortality as given by Carey during the months of August, September, October, and November was 4041, of whom 3435 died in the months of September and October. The population of the city at that time was 40,000. Epidemics occurred in the United States in 1797, 1798, 1799, 1802, 1803, and 1805. Then for many years the outbreaks were slight and localized. In 1853 the disease raged throughout the southern states. In New Orleans alone there was a mortality of nearly 8,000. In 1867 and 1873 there were moderately severe epidemics. In 1878 the last extensive epidemic occurred, chiefly in Louisiana, Alabama, and Mississippi. The total mortality was nearly 16,000. There have since been local outbreaks, the last in 1897 in which in New Orleans from September, 8th, to December, 11th, there were, according to to the Marine Hospital reports, 1902 cases, with 288 deaths. The present epidemic has been watched with unusual interest both by the medical fraternity and the people at large. From past experience in epidemics of this sort every one has looked forward to September and October with unusual dread, for it is at this time of year that the epidemic has usually become most extensiae and mortality highest. Instead of increased number of cases and increased mortality we are gratified to learn that on October 29th there were only two new cases and one death, making a total of 3389 cases with 445 deaths. The low death rate all along during this epidemic has been a peculiar feature. This is largely due to more rational therapeutic details and possibly to some extent to the infection being milder. There is no doubt that the death rate would have been much smaller had it not been the insane or rather ignorant opinion that so often prevails, occasioning the concealment of cases. The local health authorities realizing that they were unable to cope with epidemic wisely put themselves in co-operation with the Public Health and Marine Hospital service as soon as possible. Judging from past experience in these epidemics one can conscientiously say that the results would have been most disastrous had this not been done at that time.

The Public Health and Marine Hospital service is already equipped with all the essentials. There are no more experienced physicians in dealing with yellow fever and other infectious diseases, or better accomplished bacteriologists and anylitical chemists to be found in the United States. Moreover, the bureau is provided with a well equipped bacteriological and chemical laboratory, from which have eminated many important reports on water supplies, disinfectants,etiological studies of infectious diseases, serum therapy, etc.

Therefore the United States Public Health and Marine Hospital Service is looked up to by all for advance guidance and protection. It is neutral, disinterested, impartial, so that contending parties will listen to it when they will not begin to listen to each other. From the present reports from the fever districts it may be said that the epidemic is under absolute control and fast waning instead of suddenly increasing to such vast proportions as it has so often done in past epidemics at this time of year. Therefore it is with pride and gratitude that the people of the south may join in expressing their most sincere thanks to Surgeon-General Wyman of the Public Health Service and Marine Hospital Service and his associates who have so nobly carried out their plans of controlling an epidemic which promised at first to be one of the most extensive and disastrous epidemics that ever invaded this country.

THE MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA.

Dr. R. S. Kirk has resigned his position as assistant to the chair of materia medica in this college and Dr. Chas. P. Aimar has been elected to this position.

VIRGINIA TAX ON PHYSICIANS.

The doctors of Virginia through the Medical Society are making a great effort to have the law repealed, which imposes a special license tax on every physician in the State. The Medical Society has for some time been publishing a paper entitled the Medical Legislator. This paper has taken up the matter in behalf of the enterprise. Dr. J. Beverly Deshazo of Ridgeway, Va., is the editor of the paper. Judging from what we have seen of it and the

method which they have adopted it is very likely that this organized effort will succeed in having this law repealed. In North Carolina a law was enacted a few years ago compelling each physician to pay a license tax of $5.00. This works a hardship, or seemingly a hardship, on physicians who live outside of certain cities. Prior to the enactment of this law all city physicians had to pay a special tax of from $15.00 to $25.00. Physicians living outside of cities did not have to pay any special tax. The enactment provides that every physician is exempt from all other special license tax, consequently a city physician is in from $5.00 to $15.00 by this law because usually city physicians were already taxed. The principle, however, is wrong. A physician's income is very small. It does not average in North Carolina over $700.00. Fully half of what he does is given to the poorer classes, and to tax these poorly paid physicians is wrong.

THE JOHNS HOPKINS HOSPITAL.

Dr. G. R. Holden of the gynecological department, and Dr. H. M. Little of the obstetrical department have resigned their respective positions in this hospital and their resignations have been accepted by the trustees. Dr. Stephen Rushmore and Dr. F. C. Goldsborough have been appointed to fill these respective positions.

NEW ORLEANS' LOW DEATH RATE.

Statements have found their way into the editorial columns of some of our leading medical weeklies that New Orleans has the lowest death rate of any southern city. This is strange, when it is common knowledge that such is not the case. The authority that I have in mind says that the figures for the months of August and September will shed further light on the subject by showing the improvement made during the month of August: Total deaths, 735; whites, 535; colored, 200. From yellow fever, 217; whites, 210; colored, 7. Death rate for whites per 1,000 26.86; colored 27.91; total, 27.17. September, total deaths 576; whites, 370; colored, 206. From yellow fever 111; whites, 102; colored, 9. Death rate per 1,000 whites 18.57; colored, 27.77; total, 21.26. The figures for September show a lower death rate than in any southern city save one, according to this authority, and those for the last week in September are the best in the south. After looking over the death rate of New Orleans for several years, especially for the month of September, we find this a very extraordinary statement. For ten years the death rate in New Orleans during the month of September has not been less than 25 per 1,000.

The death rate in Charlotte, N. C., never exceeds 14%; in Asheville, N. C., it never exceeds 12%; in Atlanta the death rate averages about 17%; in Memphis it hardly ever exceeds 20%. Of all the cities in the United States the death rate in New Orleans is the highest of them all. There is either a mistake in the statistics referred to or the improved sanitary regulations during this epidemic have materially lessened the death rate from other causes. New Orleans, of course, is capable of being kept in fairly good sanitary condition, and no doubt when its sanitary authorities are making special efforts the low death rate is naturally noticeable.

THE LOUISIANA STATE BOARD OF MEDICAL EXAMINERS.

This board of examiners will meet November 14th and 15th. The board was originally to meet October 20th and 21st, but was postponed on account of quarantine regulations.

DIET IN TYPHOID FEVER.

Dr. Barrs in the British Medical Journal calls attention to what he terms the orthodox feeding of typhoid fever patients. Inasmuch as Dr. Barrs is very well known it may be well enough to say a word that may in a measure counteract the influence his article is likely to produce. He mentions in his usual way the extreme emaciation, feebleness and long disability following typhoid fever. He says that a true relapse is never due to the giving of solid food, that it must be due to taking into the system new infection through drinking water and milk. He says that it is difficult to conceive of any method of treatment more calculated to delay healing and cause perforation than the prolonged starvation of fluid-feeding during convalescence. He further says that the conditions that favor healing in the small intestines are the same as in the skin and every surgeon knows the value of generous feeding in favoring repair of wounds. He makes the statement that there is no reason to believe that solid food that has been well digested in the stomach interferes with physiological rest by causing active peristalsis any more than fluids.

The doctor evidently knows nothing about the clinical management of typhoid fever cases. It is common knowledge among the average physician that solid food will cause not only relapses in typhoid fever, but death. Every physician of any experience has observed this repeatedly and repeatedly. If a person actually did not have fever and had the pathological conditions that we find in typhoid fever, then feeding with solid food might be an intelligent thing to do. But a person with typhoid fever with a temperature of 102 to 105 degrees, with a dry tongue and all of

the symptoms of an ordinary case of typhoid fever cannot digest anything of a solid character, not even a capsule or a pill. The writer has observed dozens of times the inability of patients to digest an ordinary sugar-coated pill or capsule. What could a stomach do with bread or meat and articles of diet like that? It would produce a high fever, would increase the tympanites and the diarrhea and certainly the death rate. It is a prevalent belief, and an intelligent one, too, that when a physician can intelligently feed a typhoid fever patient he can give a favorable prognosis. A typhoid fever case ought to be given all the food that he can possibly digest, but if he is given more than he can digest then the practitioner will observe, if he has the ability to observe, the conditions above referred to.

It would be much better for the people who are to have typhoid fever in the future if physicians who come into contact with it in private practice would write more about it instead of people who take up a handful of charts and march through a hospital and possibly give a patient two minntes of their time a day. When a physician has treated a couple of thousand typhoid fever cases among his personal friends and among people in whom he is personally interested and watches their symptoms and every cause that produces an abnormal condition, then his opinion is worth something and he is not likely to let his name be attached to some radical method that is likely to produce a great deal of harm. As great as Alfred Loomis was and as much as the medical profession respected him and as much as he deserved it, his plan of feeding typhoid fever caused many thousand deaths. As teacher of the practice of medicine in a large medical college and as the writer of several books he taught the medical profession of the United States, or fully half of it, or 50,000 physicians to give as much as four quarts of sweet milk to fever cases in twenty-four hours, or a tumblerful every hour and a half. Feeding like this, if all the other treatment is proper and thoroughly scientific, will cause a death rate of 30 per cent. This is not an assertion based upon theory, but based upon practice. Not one patient in five hundred can digest that much milk. It produces nausea, tympanites, an uncontrollable diarrhea, very high fever, dry tongue and a death rate far greater than it ought to be.

The Tri-State Medical Association, of Mississippi, Arkansas and Tennessee will meet at Memphis, Tenn., November 21st, 22nd and 23rd, 1905. This is the twenty-second annual meeting of this well known medical association. Dr. Richmond McKinney of Nashville, Tenn., is secretary of this society and can give any information desired about the approaching meeting.

ECLAMPSIA.

Eclampsia is one of those incidendes of pregnancy which cause the obstetrician much anxiety, for as yet the pathology and prophylaxis have not been placed on a sure footing.

The convulsive condition whether anemic, diabetic, epileptic or eclamptic, is invariably associated with an increased amount of ammonia and nitrogen eliminated by the urine, both prior to, during, and immediately after the attack.

In 1896 Dr. Chas. G. Hill, in a paper read before the American Medico-Psychological Society, stated the results of his investigations on the urine in epilepsy, showing that there was invariably an increased elimination of nitrogen and ammonia in the urine of epileptics. More recently Kransky found a large increase in the blood of epileptics and the same condition has been found to exist in eclampsia. It is very improbable that the ammonia present in the blood is the direct cause of the convulsion, though it is evident that it must be as it were a by-product of the convulsive condition.

An excess of ammonia in the blood can be produced by an arrest of the metabolism in which the ammonia is not converted into urea and it would then exist either as carbamate or carbonate of ammonia or on account of the presence of excess of an acid in the blood, forming a combination which the liver is unable to convert into urea.

This condition would be due to the formation of some normally present, organic acid in excessive quantity or an acid not normally present, but formed through perverted metabolism or in intestinal putrefaction. Any condition, therefore, which reduces the alkalinity of the blood would increase the amount of ammonia eliminated by the urine. Pugh, in "Brain," 1903, has shown that the alkalinity of the blood is below normal in epilepsy.

During pregnancy the nervous system is more unstable than at other times and therefore many pathologic conditions might produce convulsions. Anemia, the presence of ammonia carbonate or carbamate in the blood, edema and anemia of the brain, bacterial invasion, auto-intoxication, hepatotoxemia, perverted fetal metabolism, disease of the placenta, retention of nitrogen, pressure of the uterus on the ureters, have all been advanced as etiologic factors producing the condition. Owing to the unstable condition of the nervous system during pregnancy any of the above conditions

might produce convulsions, but they are not constant enough to be considered as the causes of the definite clinical entity of eclampsia.

The consensus of opinion at the present is that the eclamptic convulsions are the result of auto-intoxication and that the conditions existing are an increased mean blood-pressure, a perverted metabolism, a decreased elimination by the kidneys, and in the majority of the cases albuminuria and casts in the urine. The pathologic findings being fatty degeneration of the liver and kidneys.

The placenta may be looked upon as a digestive organ preparing the nutrition for the fetus, and possibly it also has an hepatic function destroying the toxic products of fetal metabolism before the fetal blood enters the vena cava, consequently a pathologic condition of the placenta might produce toxemia. A certain number of cases of eclampsia are due to renal and hepatic insufficiency, either primary or secondary.

The connection of the thyroid gland with the organs of generation has been established, the gland enlarging at puberty and during menstruation, pregnancy, and lactation; the far-reaching effect of hyposecretion of the gland and the various disturbances the condition produces have led many investigators to experiment as to the possibility of producing eclampsia by partial thyroidectomy. In experimenting with thyroidectomy Halstead observed that a bitch which had been deprived of a large portion of her thyroid gland, but remained apparently in perfect health, became impregnated by a normal dog, progressed without any signs of hypothyroidea till term, but at delivery showed all the symptoms of athyroidea, including convulsions. Since this observation many experiments have been made on this point, notably those of Verstraeten and Vanderlinden, Eiselberg, Jeandelize, and Lange. The latter removed a fifth of the thyroid gland from ten pregnant cats; two died in coma, one 23 days, and the other 38 days after the operation, three had convulsions 23 and 25 days after operation. Lange found fatty degeneration of the kidneys and liver, three cats had albuminuria, five remained well, but at autopsy three of them had fatty degeneration of the kidney. Five other non-pregnant cats were operated upon in the same manner as controls without any apparent effect.

Lange examined a series of 133 cases of pregnancy and found that the hypertrophy of the gland commenced in the fifth month in multiparas. He also found that on the administration of small doses of thyroid to pregnant women with enlarged thyroid that the gland returned to normal size, but on the cessation of the treatment it again hypertrophied. Of the 133 cases examined he found enlarged in 108 cases, three were doubtful, in 22 there was no enlargement; of the 22, 20 showed albuminuria, 16 albuminuria with casts; six of these patients developed eclampsia; of the 108 with hypertrophied gland only two had albuminuria, and one of these was a nephritic; none of the 108 developed eclampsia.

Hargott reports a case of incomplete myxedema in which eclampsia occurred. Verstraeten and Vanderlinden, and Nicholson report cases of eclampsia which they attribute to thyroid insufficiency. Nicholson treating a patient with thyroid with success.

The thyroid function being increased during pregnancy it is evident that if for any reason the thyroid has failed to develop fully, though secreting sufficiently under ordinary conditions, it will fail to respond to the excessive demand upon it during pregnancy. It is by no means uncommon for the thyroid to be affected by the acute diseases of childhood, rheumatism, typhoid, etc., as has been shown by Garnier and Roger, consequently at the first pregnancy there is a deficiency of thyroid secretion which may be a factor in producing eclamptic convulsions at term in primiparas. The exitation of the gland during pregnancy will have tendency to increase its functions, preventing the recurrence of the symptoms at the next pregnancy. In other cases the gland never acquires a sufficient secreting power and eclamptic convulsions occur at every successive labour. In those who have no eclamptic symptoms at the first pregnancy, but in whom they appear in the later pregnancies it may be assumed that the strain upon the gland during first pregnancy or some intercurrent disease affected the function of the gland.

The principal symptoms of eclampsia are the same as those of hypothyroidea, high mean arterial pressure, decreased elimination by the kidneys, perverted metabolism and very often albumin and casts. In partially thyroidectomized animals the same symptoms occur, while the principal pathologic lesion is fatty degeneration of the liver and kidney, the same as in eclampsia.

From the above data it is probable that a certain number of cases of eclampsia are due to a hyposecretion of the thyroid gland. (The knowledge of the functions of the parathyroids is not sufficiently advanced at present to give any theory as to their connection with this disease, except upon the general principle that the thyroid proper has to do principally with the nutritional and the parathyroids with the nervous symptoms produced by thyroparathyroidectomy).

THE CITY SURGEON AND THE GENERAL PRACTITIONER.

It is an increasing belief among general practitioners, especially those who live in small towns and in the country, that specialism tends to depreciate them. Such a belief is detrimental to every one concerned. We are all willing to admit that the country physician is a good diagnostician and a good all-round man. In making a diagnosis he approaches his case from every standpoint and his conclusions are usually plausible and correct. He treats his cases intelligently and with remarkable success when the nursing and environments are taken into consideration. While all of this is the case, and we readily admit that the average physician in the rural districts, certainly in this part of the country, has as many merits and as many accomplishments and as many things to commend him to society and to the community and to the medical profession as the city physician, we are inclined to believe, really we do believe that there are a great many cases that they cannot treat as well as a city surgeon in a well equipped institution or hospital, specially arranged for the purpose. This will apply to surgery more than in any other branch of medicine. Of course, if the proper effort is made, enough preparation, a room in a private house can be made as aseptic and possibly as suitable to perform an important surgical operation as if the patient was in a hospital, but the facilities for bringing this about are not always practicable, really it is seldom that they are practicable. Besides it is usually the case, and why it is I don't pretend to know, that the isolated physician, no matter how well or properly he is trained, soon becomes indifferent about aseptic methods in surgery, really he is often found depreciating these methods, and the results he obtains in what surgery he does will not at all compare favorably with that of a skilled, painstaking surgeon in a well equipped hospital with good assistance and competent nurses. I have known many young practitioners who have had aspirations to do surgery, who soon found out that their facilities when practicing medicine in the country and the limited amount of work of this kind that they could do, did not tend to fit them for this kind of work, consequently they soon began to take into consideration the interest of their patients and referred them to hospitals and to surgeons proper who did nothing else but surgery.

The medical profession may carry specialism to an excess—it may be a fad with us even now—but when it comes to surgical work a man who treats typhoid fever and pneumonia and diphtheria and has made a special study of children's diseases and devotes nine-tenths of his time to this kind of work cannot be expected to be an expert surgeon. He does not do enough of it and his experience is always limited, and his work usually is very crude and the results never compare with those of a more experienced and a more skilled surgeon.

THE BLOOD IN LEUKEMIA CHLOROSIS AND PERNICIOUS ANEMIA.

The three forms of leukemia lymphatic, splenic, and mylogenic are characterized by their individual physical signs, also by the conditions of the blood found in each form. The lymphatic form having an enlargement of all the lymphatic glands of the body, the splenic by the enlargement of the spleen and the mylogenic by the involvement of the bone marrow. These forms, however, rarely appear as pure forms but are more or less associated, especially the splenic and mylogenic. The pains in the bones in the mylogenic form is often mistaken for that of syphilis.

On examining the blood in the lymphatic form we find a great leucocytosis consisting of small mononucleated leucocytes if besides the lympatics the spleen is enlarged also find some large mononucleated leucocytes present.

In the mixed form (spleno-meduelary leukemia) find the polynucleated large mononucleated and many eocinophiles present [a few days before death the eocinophiles disappear.]

In a pure splenic form find here few eocinophiles present, sometimes none, but many polynucleated and transitional leucocytes. Normally the proportion between the red blood corpuscles and white is about 500 to 1; in leukemia it may be 10-1 5 to 1, or 1 to 1, or even 1 to 2.

In pseudo-leukemia or Hodgkins disease have the enlarged glands, but the blood shows no increase in the leucocytes or only an increase of the polyneuclear leucocytes.

Primary progressive pernicious anemia, as its name implies, is progressive and chronic, lasting at times over a year, and the peculiar lemon tinge of the skin, hemorrhages in the eyes, interfering with vision, diarrhoea and finally exhaustion, are the characteristic symptoms of this disease.

The blood in pernicious anemia: 1st, there is a great diminution of the number of red blood corpuscles and no rouleau formation. 2d, the hemoglobin in the red blood corpuscles is either normal or very slightly diminished. 3d, there is a great irregularity in the size and shape, and in no other disease do we find such a marked Poikileucocytosis. 4th, there is a great diminution in the number of leucocytes.

The mild form of chlorosis is characterized

by some diminution of the red blood corpuscles, but there are still rouleau present. There is a pronounced diminution of hemoglobin but not much change in size and shape.

In the severe form of chlorosis there is a marked diminution in number and in the amount of haemoglobin, but there is a great irregularity in size and shape and there might be a poikilocytosis. Therefore it will be seen that in leukemia the white cells play the role while in chlorosis the red blood corpuscles play the role.

In preparing a blood specimen one generally gets the best specimen by pricking the lobe of the ear and wiping away the first drop (not using any pressure to force the blood out as this pressure may cause a change in the form of the red blood cells.) Then having cleaned the cover slips touch one to the drop of blood and quickly lay the others over it and draw them across one another; in this way an even film is formed on both cover slips. May let dry in air for a few minutes or else draw through a flame and thus fix the specimen. For ordinary purpose the quick method, namely, the triple stain, is the most useful.

A diagnosis of the increase of the leucocytes is made by counting them with special apparatus, but for practical purposes it is sufficient to stain specimen and count the number of leucocytes which are present in the fields of vision.

Count about 20 fields; if there are less than 20 leucocytes present there is no increase. If you find on the average one leucocyte in each field there is a slight increase; if 2 to 5 in each field there is a medium increase; more than five is a great leucocytosis.

The examination of the red cells so important in primary pernicious anemia and chlorosis, if the case is one of pernicious anemia find a poikileucocytosis (this is very characteristic and easy made out as the cells instead of having perfect outline as they should normally, assume the most varied forms.) The hemoglobin in these cases is increased or normal and the number of red blood cells greatly lessened, the latter being determined by the absence of a definite rauleau formation.

In chlorosis the hemoglobin is lessened and generally begins to disappear from the center of the corpuscle, so that one can tell the grade of chlorosis by the size of the clear space in the center of the corpuscle.

Although the above methods are not used in purely scientific researches, still they save time and for all practical purposes answer for the general practitioner who hasn't the time to spend with delicate and more accurate instruments.

Review of Southern Medical Literature.

Memphis Medical Monthly, September, 1905.

Blood Spitting—Its Significance.—Dr. Richmond McKinney states that the majority of cases wherein hemoptysis is a symptom are pulmonic in origin and close examination at the time, or, perhaps, in some instances future developments will show an apical invasion by the bacillus tuberculosis to the etiological factor in such disturbances, yet there are a number of instances in which the hemoptysis may originate in another region, and thus a diagnosis becomes exceedingly important. Preborajeuski in a paper on "The role of the Nose Pharynx and Larynx in Hemoptysis" concludes.

1. Hemorrhage of the upper respiratory tract is encountered much more frequently than is believed.

2. It originates essentially in an inflammatory zone or from a dilated blood vessel.

3. The quality of the blood does not speak for this, or that origin and the abundance of the hemorrhage does not exclude the possibility of its pharyngeal origin.

The author does not agree with the above statements but claims that hemoptysis is seldom due to local conditions in the nose pharynx and larynx. There are numerous causes given for hemoptysis other than pulmonary tuberculosis among which are mentioned ulcerative processes of the nose pharynx and larynx traumatisus muscular efforts, violent paroxysms of cough, hemophilia, vicarous menstruation, chronic heart disease, various acute infactious diseases, etc., but the commonest causes of blood spitting other than the lungs in the author's experience have been ulcerations in the nose and throat, simple and specific lingual tonsil varicosis, and violent coughing in cases of chronic alcoholic gastritis.

A rather unusual cause of hemoptysis and which might prove confusing is that peculiar pathological state called pneumokomosis, which is a disease of the lungs due to the inhilation of dust in various occupations, one of the symptoms of which may be a blood-stained expectoration usually very dark in appearance.

The author believes that there is nothing so surely pathognomonic in early pulmonary tuberculosis as that little rise in temperature in the afternoon and hovering around 99 to 100 degrees F. It may run higher than this, but when it does and mixed infection is suspected, for invasion of the tubercle bacillus rarely shows in its early stage a rise of temperature beyond 100 degrees F. This little fever persisting and unbroken by quinine, always present in the afternoons is a symptom which ranks first

in all points of diagnosis. Excluding local lesions of the nose, throat and larynx a history of hemoptysis with an afternoon rise of temperature, even without the presence of tubercle bacilli in the sputum, and without any other symptoms whatever is sufficient for a positive opinion of tuberculosis, and therefore give the patient the benefit derived from an early change to a suitable climate. The patient having once found a favorable climate induce him to remain there the balance of his life and not to commit the oftentimes irreparable error of endeavoring to return to the locality in which he had developed his tuberculosis for future residence, laboring under the delusion that because his symptoms have subsided during his sojourn in another climate he is permanently cured, for the author, according to his past experience, is firmly convinced that they never are.

The Association of Meningitis with Mastoid and Middle Ear Inflammation.—An Inquiry as to the Relation between them.—By Dr. E. C. Ellett, Memphis.

Southern Medicine and Surgery, September, 1905.

The Menopanse.—Dr. W. L. Peple says that the term menopause simply means the cessation of the menstrual function and may be a period of actual pathological changes or is at least a time strewn with difficulties and beset with hidden dangers. Hippocrates observed that "cessation of the menses gave rise to exulcerations violent and often, scirrhous tumors of the uterus."

The menopause is a period of one to four years occuring in the fifth decade of a woman's life, during which time menstruation becomes irregular, wanes and ceases, while the power of ovulation fails. It is physiological in its nature and not pathological.

The structural changes that take place in the generative organs are atrophic in nature, the ovary contracts, the blood supply is diminished, the Graafian follicles disappear and the organ becomes small and cirrhotic. The uterus shrinks with the increase of connective tissue over the muscular tissue and there is a consequent dimunition of the blood supply. The vagina and vulra suffer atrophy and relaxation. The breasts also to some extent share in these changes.

The signs of menopause in a healthy woman consist first in irregularity of her periods until it finally ceases. With the exception of flushes of heat, a little nervous irritability, or the customary inconveniences of menstruation she experiences nothing unusual.

Although forty-five is the average age at which it is completed instances are on record in which menstruation has ended as early as seventeen and persisted as late as one hundred and four. Climate influences it materially, for women of southern countries mature, bear children, and decay far earlier than those of colder regions. Obesity seems to bring an early menopause, probably from defective circulation. Frail women show this tendency in the amenorrhoea which is so common to them. Wasting diseases, rapid child bearing in a young woman, heredity destructive diseases of the pelvic visera, and neoplasms of the uterus all tend to hasten the menopause.

Among the local symptoms of a morbid menopause pain and dragging at the hips are of the least importance from a diagnostic standpoint; the hemorrhage, however, is the most important. That copious bleeding in the absence of decernable lesion may occur at this time cannot be denied. The fact that physicians know it to be rare does not alter one whit the deep rooted belief in the lay mind that it is not only frequent but perfectly natural. This then is one of the reasons why so many cases of cancer are allowed to go on until they are beyond the curable stage, and also why hemorrhage from various local causes are not treated until they are chronic, or at least well established.

Of all the accompaniments of the menopause the hot flush is the most constant. It consists of a sudden flush of heat which covers the face and neck like a blush, or even prevades the whole body. It quickly passes and is usually followed by sweating. They may persist for a year or more after menstruation has stopped. Palpitation of the heart and the feeling of fullness in the head are also attributed to disturbances of the sympathetic system.

The nervous symptoms are as varied in character as in degree, embracing all the concomitants of suppressed menstruation and ringing all the changes from mild hysteria to mania. In the treatment of these nervous symptoms occurring at time of menopause the author says that static electricity has proven the most useful agent in his hands.

The Virginia Medical Semi-Monthly, September 8th, 1905.

Principles of Surgery, Lecture IX—Inflammation — Importance — Difficulty of Study—Nature of Process—Definition of Causes and Pathology of Inflammation.—By Dr. Stewart McGuire, Richmond, Va.

Constitutional Treatment of Syphilis.—Dr. M. C. Sycle believes and therefore recommends the hyperdermic method of treating this disease. It can be used with better results than any other method and is better for both physician and patient.

If inunctions are used the patient may stop treatment on account of the filth of

this method. In regard to fumigations these are seldom used except in severe cases but are considered very efficacious.

The most common method is protoiodide given by the month. It is slow in its action and allows the patient to treat himself thereby placing him out of reach of the physician. It often happens that the patient is unable to take a large enough dose to control the syphilitic lesion present. Intramuscular injections of the salicylate of mercury have the following advantages: First, it does not form abscess as might at first be suspected. Second, they are quick and sure. Third, they are more scientific and accurate. Fourth, the skin and gastrointestinal tract are relieved of irritation. Fifth, economy to the patient. Seventh, only has to be given once a week, due to the insoluable properties and slow absorption of the drug.

Salicylate of mercury is a fine, white powder insoluble in water, the dose being internally from one-fourth to one-ha f grain and as an injection in ordinary cases one grain and a half. The author has used as high as six grains. It is put up in one-drachm vials each containing one and three-quarter grains of salicylate of mercury and about thirty minims of liquid benzional or albolene.

Gaillard's Southern Medicine, Sept. 1905.

The Administration of Chloroform and Ether.—Dr. W. W. McKenzie believes that surgeons and medical men are learning to look upon the giving of ether and chloroform and even nitrous oxide as a very responsible occupation requiring both study and practice. The danger of anesthesia has been supposed to be the anesthetics themselves, and the peculiar susceptibility of the patient or his physical condition and not in the method of administration. This of course to a degree is erroneous.

The stage of excitement and struggling that precede the stage of anesthesia with ether is more prolonged than with chloroform. This objection may be partially eliminated by administering nitrous oxide or chloroform until the period of excitement has passed.

Chloroform does not increase arterial tension and does not congest the kidneys but has a tendency to interfere with the heart's action especially if the heart muscle is diseased and in conditions accompanied by chronic anemia. Therefore if it becomes a matter of choice one should select ether if the heart action is unsatisfactory and if the patient is markedly anemic and chloroform if the urine shows defective kidneys or if there is a tendency to cerebral appoplexy or pulmonary disease and in case of empyema. Chloroform is also preferable to ether in young children and very old people. Alcoholics as a rule take chloroform much more satisfactory than ether. Edward Martin recommends spraying the throat and nose with a solution of cocaine two per cent. in adreulin chloride 1-10000 immediately preceding the administration of ether as it lessens the danger of cardiac and respiratory inhibition which may cause death in the early stages of anesthesia, makes the nasal airway patulous and so diminishes the secretion of the mucous that the anaesthetist is very little troubled by accumulations of this kind in the throat. This preliminary spray also does away with the sense of laryngeal constriction and suffocation which to many patients is the most disagreeable part of an operation.

With few exceptions the difficulties encountered will be due to mechanical obstruction of the respiration. This obstruction will be caused in the early stages by a rigid closure of the jaws and a thrusting of the tongue against the hard and soft palate or its dropping back against the posterior pharyngeal wall. Even though it be impossible to open the jaws the pharynx can be opened widely and the epiglottis lifted by extending the head upon the neck. This at once relieves the difficulty if the nasal passages are free. In children most common obstruction is mucous which can be avoided by using the cocaine and adreulin as recommended by Martin. If this symptom persists it may be necessary to allow the patient to partly come out of the anesthesia and allow him to cough and clear out the collection of mucous.

In profound anaesthesia the air passages may be mechanically blocked by the relaxed tongue dropping backward so that its base together with the epiglottis lies in the clear opposition to the posterior pharyngeal wall. This may be obviated by extending the head upon the neck. The tongue may be freed from the soft palate by grasping its top and pulling it forward. The head extension and traction upon the tongue are both needful to insure a free passage of air through the mouth.

When the tongue is particularly thick and fleshy even traction upon its top may fail to open the way between its dorsum and soft palate. Under such circumstances the anaesthetist should force a finger well down towards the base when, by upward and forward traction, the air passage may be freed.

In some persons the first effects of chloroform are violent struggles and there is danger in trying to overcome these struggles by pushing the drug very rapidly. This is particularly apt to be the case in athletes and drunkards. Total muscular relaxation

should never be caused by the drug.

One of the earliest signs of the over action of ether is the failure of the diaphragmatic movement, therefore the rule that when the diaphram ceases to act anesthesia has been carried to its extreme legitimate limit and the use of the anesthetic after that time must be carried on with great care and watchfulness.

Southern Clinic, Sept. 1905.

Carbolic Acid and Its Uses.—By M. L. Dalton, Floyd, Va.

Atlanta Journal-Record of Medicine, Sept. 1905.

Tuberculosis.—By Dr. J. W. Hurt, Atlanta, Ga.

Southern Practitioner, Sept. 1905.

The More Serious Complications of La Grippe or Influenza.—By Dr. E. A. Cobleigh, Chattanooga.

New Orleans Medical and Surgical Journal, Sept. 1905.

The Early Diagnosis of Carcinoma of the Stomach —By Dr. Sidney K. Simon, New Orleans.

American Practitioner and News, Sept. 1905.

Some Remarks on the Treatment of Cancer.—Dr. J. Shelton Horsley says so far as the origin of cancer is concerned there is little more knowledge now than was in the possession of our forefathers. Still it cannot be said that no progress has been made in the study of cancer. No one can explain why a grain of corn sprouts and grows, and in fact all vital phenomena are surrounded by a cloud of impenetrable mystery. Though no one can explain the origin of life, a person who studies the habitat, the method of growth and the conditions favorable to life of a grain of corn is certainly more fitted to cultivate this cereal successfully than one who is ignorant of the original cause of growth. So in cancer, one who studies the tumor as a whole and the cells as units composing it and notes the rapidity of growth, the various kinds of cancer and the relative malignancy of some as compared with the almost benign course of others, is certainly much better fitted to deal with these neoplasms intelligently than is an individual who ignores such sources of knowledge.

The epitheleomas that are often about the upper portion of the face seem to remain the same for years and are so slightly malignant that their progress may not be perceptible. It must be remembered, however, that not infrequently these forms take on vigorous growth though the majority of them do not give serious trouble. They sometimes appear as an open sore or ulcer and sometimes as wartlike process. The most benign forms are usually small ulcers with hard margin and a shallow, indolent surface. These forms may sometimes be cured with paste. Sometimes, however, the paste does not cure but merely incites a sleeping growth to greater activity. Some of the most difficult cases of cancer that the author has ever had to operate upon were those that originated as small, almost harmless skin cancers that might have been excised with knife, but instead have been treated by the advertising quack with paste the growth taking on great activity and becoming very extensive. This character of growth is very much more easily cured by the use of the X-ray and the scar left by such treatment is less conspicuous than that left by paste. While mild cases of the upper part of the face may be subjected to the treatment of paste, or better still, X-ray that form which occurs on the mucous membrane or at the junction of the mucous membrane with the skin should never be submitted to any other treatment than excision with the knife.

Cancer extends in two ways. First, by continuity and contiguity of tissue, in which case the line of travel of cancer is infiltrated by the cancer cells. and secondly, by the blood and lymph. In this latter instance the infective cells are transported along the lymphatics or blood vessels more frequently, the former until they strike a place of lodgment. The lymphatics in blood vessels which transport these cells may, however, be unaffected. In this way we may operate upon a cancer of the face and at the same time remove glands which have become involved beneath the jaw without necessarily making a continuous incision from the growth to the gland, as the lymphatic which have transported the cells have merely served as common carriers. When the cancerous process has extended by continuity or conteguity of tissue the cancer cells are found in all intermediate points between the most recent outgrowth and the original tumor. The practical and plication of this point is that whenever a cancer is removed the tissue involved should not be cut through if it is possible to avoid it, but removed in mass, for if the infected tissue is cut through some of these cells are most liable to be spilled into the wound and the surgeon will in this way implant cancer cells into the ltissue that was previously healthy and reproduce the cancer as surely as if the infection had been carried by the lymphatics.

What Can I Eat?—Dr. John J. Moren regards this as an old question and apologizes for such a subject by saying that it is his belief that in many conditions we restrict the amount of foodstuff below that

which is really needed to meet the functional activity of the body. Probably no part of any branch ofiscience is being studied and changed to a greater benefit than that which pertains to feeding. There is no doubt that errors are committed in due probably to the detriment of the patient though certainly agreeable at the time and strenuously denied when the aftermath of gout, etc., manifest themselves. The author fully agrees with Leube who says that the protied should take the front rank as food.

The fats and cabohydrates furnish heat and energy while salts and water become necessary and essential to accomplish the transformation of food into heat energy and cell activity. The fact that the best people in every respect are those who live upon a mixed diet cannot be denied. In health particularly Americans take full advantage of this fact and their mixture is often too large.

The amount needed varies with the individual season, work, etc. People do not live upon what they eat but upon what they digest and the excess over and above what is needed becomes a burden manifested in obesity and metabolic disturbance. Much of the food is bulky but contains little nourishment. A striking comparison is 1 pint of milk which is equal to 86 oz. of strawberries, 30 oz. of oysters, 42 oz. of beer, 32 of potatoes. Ten oz. of lean meat is equal to 274 oz. of beef tea. Men cannot thrivupon a one-sided diet. His stomach is not built that way. To obtain sufficient nitrogen from vegetables there will be too much carbohydrates and bulky cellulose. Man has no pouch as the ox. An excess of meat diet disturbes the nitrogen balance and furnishes too little carbon-bearing material.

As viewed from recently added facts the drocess of digestion is a wonderful display of reflexes exhibiting that old Christian rule "help one another." The sight, taste, relish excite the gastric secretions, free acid opens the pylorus acid in the duodenum, closes the pylorus and excites the pancreatic secretion, the pancreatic neutralizing the acid and again the pylorus opens, etc.

The author goes on sighting cases to illustrate the folly of too strict diet in various cases. It is not so much the dieting that relieves the patient as combatting the cause of the indigestion and suiting the diet accordingly. By this the patient is fed and will regain his strength and stability instead of having his resistance lowered by strict dieting.

In conclusion President Lincoln is quoted as saying, "Eat three square meals, say your prayers, be courteous to your creditors and steer clear of hiliousness."

Maryland Medical Journal, Sept. 1905

A Review of 3676 Deaths Due to Cancer in Baltimore City from 1891-1904, Inclusive.—By Dr. C. Hampton Jones.

The Texas Medical Journal, Sept. 1905.

The Evolution of Medicine.—By Dr. Malone Duggan, San Antonio, Texas.

Book Notices.

The National Standard Dispensatory. Containing the Natural History, Chemistry, Pharmacy, Actions and Uses of Medicines, including those recognized in the Pharmacopœias of the United States, Great Britain and Germany, with numerous references to other Foreign Pharmacopœias. In accordance with the United States Pharmacopœia, 8th decennial revision of 1905 by authorization of the Convention. By Hobart Amory Hare, Sc., M. D., Professor of Therapeutics in the Jefferson Medical College, Philadelphia, Member of the Committee of Revision of the U. S. P.; Charles Caspari, Jr., Ph.G., Phar. D., Professor of Pharmacy in the Maryland College of Pharmacy, Baltimore, Member of the Committee of Revision of the U. S. P.; and Henry H. Rusby, M. D., Professor of Botany and Materia Medica in the College of Pharmacy of the City of New York, Member of the Committee of revision of the U. S. P. Imperial octavo, 1858 pages, 478 engravings. Cloth, $7.25, net; leather, $8.00, net. Thumb Index, 50 cents extra. Lea Brothers & Co., Publishers, Philadelphia and New York 1905.

To practitioners of medicine and pharmacy this new work of the highest authority is of great importance. It contains, by authorization of the Convention, every article in the new edition of the U. S. Pharmacopœia, together with such explanatory notes and instructions as are necessary to a full understanding of the brief official statements. In addition it covers the essentials of the latest foreign Pharmacopœias, and the very important domain of unofficial drugs and preparations so largely in use. Of its authors, Dr. Rusby has treated the department of Pharmacognosy, including the minor as well as the major drugs of the entire globe, a service never before rendered; Prof. Caspari deals with Pharmacy, giving full information regarding methods and products, with descriptions and explantions of the most approved apparatus and tests, and Dr. Hare has written the section on Medical Action and Uses giving a direct and compact presentation of modern therapeutics. An Appendix of 60 pages

contains all necessary tables, formulas, tests, etc., for practical use. The General Index, of about 90 pages, contains full reference, to every page in the text, making it a repertory of the world's knowledge of drugs, and the Therapeutical Index, of about 40 pages, contains, under the name of each disease, references to all the medicines employed in its treatment, leading the reader to the points in the text where the conditions indicating their employment and choice will be found. In a word, the National Standard Dispensatory is a new, practical and authoritative work containing information on all substances used in medicine and pharmacy at the present day. The volume is embellished with no fewer than 478 new and instructive engravings in the text.

A Manual of the Practice of Medicine. By A. A. Stevens, A. M., M. D., Professor of Pathology in the Woman's Medical College of Pennsylvania, and Lecturer on Physical Diagnosis at the University of Pennsylvania. Seventh Edition, Revised. 12mo of 556 pages, illustrated. Philadelphia and London: W. B. Saunders & Company, 1905. Flexible Leather, $2.50 net.

We know of no work on practice of the same size containing so much practical information concisely stated, as this handy little book by Dr. Stevens. The author's epigrammatic style is no doubt the result of his extensive experience in the lecture room, enabling him to group allied symptoms in such a manner that they can be easily retained in the mind of the student. By a judicious elimination of theories and redundant explanations he has brought within a small compass a complete outline of practice of inestimable value. Indeed, for the student, the practitioner, and the nurse as well, we know of none better.

Atlas and Epitome of Diseases of the Skin. By Professor Dr. Franz Mracek, of Vienna. Edited, with additions, by Henry W. Stelwagon, M. D., Professor of Dermatology, Jefferson Medical College, Philadelphia. Second edition, revised, enlarged, and entirely reset. With 77 colored lithographic plates, 50 half-tone illustrations, and 272 pages of text. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $4.00 net.

It is with much pleasure that we review the second edition of Professor Mracek's admirable hand-atlas. That the work is a success and of practical usefulness needs no further proof than the demand for a second edition, not only in America but also in Germany. The author has added some twenty-six new plates, fifteen of them colored lithographs, and all of exceptional merit. The text he has thoroughly revised to include the most recent dermatologic advances, especially along the line of histopathology. As in the first edition, there is evidence of the conscientious editorial work of Dr. Stelwagon, many additions being interspersed throughout the text.

A Text-Book of Clinical Diagnosis. By Laboratory Methods. For the use of Students, Practitioners, and Laboratory Workers. By L. Napoleon Boston, A. M., M. D., Associate in Medicine and Director of the Clinical Laboratories at at the Medico-Chirurgical College, Philadelphia. Second edition, revised and enlarged. Octavo of 563 pages, with 330 illustrations, including 34 plates, many in colors. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $4.00 net; Sheep or Half Morocco, $5.00 net.

It must, indeed, be a great gratification to an author when two editions of his work are required in one year. From such a reception it is evident that Dr. Boston's Clinical Diagnosis fills a demand. In this new second edition many new subjects have been added, including Biff's New Hemogelometer, Ficker's Reaction, an illustrated description of the Leishman-Donovan Bodies, Ravold's Test for Albumin, Cammidge's Test for Glycerin, and Cipollino's Test. The subjects of cystodiagnosis and inoscopy are given more extended consideration, the practical usefulness of these methods having been clearly demonstrated. Throughout the text it has evidently been Dr. Boston's aim to emphasize in progressive steps the various procedures of clinical technic, illustrating such steps whenever possible. An unusual amount of space is given to the consideration of animal parasites, malarial and other blood parasites, skin diseases, transudates and exudates, and the secretions of the eyes and of the ears.

A Text-Book of Diseases of Women. By Barton Cooke Hirst, M. D., Professor of Obstetrics, University of Pennsylvania. Second edition, revised and enlarged. Octavo of 741 pages, with 701 original illustrations, many in colors. Philadelphia and London: W. B. Saunders & Company, 1905 Cloth, $5.00 net; Sheep and Half Morocco, $6.00 net.

Dr. Hirst may well be congratulated upon the publication of such a work as this, a second edition of which has just appeared. Written on the same lines as his "Text-Book of Obstetrics," to which it may be called a companion volume, it gives every promise of attaining a similar success. The palliative treatment of diseases of women

and such curative treatment as can be carried out by the general practitioner have been given special attention, enabling physicians to treat many of their patients without referring them to the specialist. Indeed, throughout the book great stress has been laid upon diagnosis and treatment, and the section devoted to a detailed description of modern gynecic operations is without doubt the most clear and concise we have yet read. In this second edition the revision has been thorough, introducing, however, only such matter that promises or has been demonstrated to be of permanent value. Forty-seven new illustrations have been added and thirty of the old ones replaced, the work now containing a collection of seven hundred and one beautiful original illustrations, many of them in colors. We take much pleasure in recommending Dr. Hirst's work to the medical profession generally.

A Text-Book of the Practice of Medicine. By James M. Anders, M. D., Ph. D., LL. D., Professor of Medicine and of Clinical Medicine at the Medico Chirurgical College, Philadelphia. Seventh edition, revised and enlarged. Octavo of 1297 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $5.50 net; Sheep or half Morocco, $6 50 net.

A sale of over 22,000 copies and the attainment of a seventh edition seems sufficient recommendation for any book; in fact, Anders' Practice does not now need any recommendation—it is too well known. As in the former editions, particular attention is bestowed upon inductive diagnosis, differential diagnosis, and treatment. Regarding differential diagnosis, we notice with much satisfaction that the many diagnostic tables of simulating diseases have been retained. The clinical value of these tabulated points of distinction is beyond cavil. Numerous new subjects have been introduced, among which are: Rocky Mountain Spotted Fever, Examination of Patients for Diagnosis of Diseases of the Stomach, Splanchnoptosis, Cammidge's Test for Glycerose in the Urine, and Myasthenia Gravis. Certain other individual affections have been entirely rewritten and important additions have been made to the diseases which prevail principally in tropical and subtropical regions. The seventh edition of Dr. Anders' Practice maintains the reputation of the work as the best practice before the profession to-day.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Neutology, Opthalmology, Otology, Rhinology, Laryngology, Hygiene and Other Topics of interest to Students and Practitioners. By leading members of the medical profession throughout the world. Edited by A. O. J. Kelly, A. M., M. D., Philadelphia, with the collaboration of William Osler, M. D., Oxford, John H. Musser, M. D., Philadelphia, James Stewart, M. D., Montreal, J. B. Murphy, M. D., Chicago, A. McPhedron, M. D., Toronto, Thomas M. Rotch, M. D., Boston, John G. Clark, M. D., Philadelphia, James J. Walsh, M. D., New York, S. W. Bllantyne, M. D., Edinburgh, John Harold, M. D., London, Edmund Holt, M. D., Paris, Richard Kretz, M. D., Vienna. With regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Carlsbad. Volume II, fifteen series, 1905. J. B. Lippincott Company, Philadelphia and London.

In Volume II of the fifteenth series of International Clinics we have a number of the characteristically practical articles by able clinicians, which is a distinguishing feature of this work, and the contributions to this volume have such wide and varied range that they should gain for the volume an unusually wide circle of readers. There are articles on general medicine, on treatment, on surgery, on gynecology, on ophthalmology, on rhinology, on physiology and on pathology. These are all interesting, and of scientific and practical worth. One of the most interesting contributions to this volume is the one by Dr. Felix Terier, of Paris, on the use of scopolamin as a general anesthetic in surgery. The author discusses most interestingly the use of this new and powerful agent, which seems destined to revolutionize general anesthesia, and every medical man, be he surgeon or general practitioner, will find it well to post himself upon the subject by reading this article.

Ophthalmic Neuro-Myology. A Study of the Normal and Abnormal Actions of the Ocular Muscles from the Brain Side of the Question. By G. C. Savage, M. D., Professor of Ophthalmology in the Medical Dedartment of Vanderbilt University; author of "New Truths in Ophthalmology" (1893), and "Ophthalmic Myology" (1902); ex-President of the Nashville Academy of Medicine; ex-President of the Tennessee State Medical Association. Thirty-nine full-page plates and twelve illustrative figures. Published by the author, 137 Eighth Avenue, North, Nashville, Tenn. Printed by Keelin-Williams Printing Co., Nashville,

Tenn.

We take pleasure in acknowledging the receipt of this notable work of this well known specialist and feel sure that it will meet with a welcome from both specialist and general practitioner. Many of the author's ideas are original and are deductions of a long experience and careful observations. We feel sure much practical information of use to the specialist and to the physician who has in a general practice to do more or less eye work can be acquired by a study of this interesting contribution. We congratulate Dr. Savage upon the excellence of the work.

Abdominal Operations. By B. G. A. Moynihan, M. S. (London), F. R. C. S., Senior Assistant Surgeon to Leeds General Infirmary, England. Octavo of 695 pages, with 250 original illustrations. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $7.00 net.

It has been truly said of Mr. Moynihan that in describing details of operations he is at his best. This, his latest work, therefore, will be widely welcomed by the medical profession generally, giving as it does in most clear and exact language the preliminary technic of preparation and sterilization, as well as the actual modus operandi of the various abdominal operations. Mr. Moynihan's reputation in this field is international, and this work, stamped with the authority of a rare experience, is undoubtedly to become the recognized standard. Peritonitis and appendicitis, the latter of such present importance, have been accorded unusual space in a work of this kind; and the subject of chronic gastric ulcers is also excellently detailed. Throughout the entire book numerous cases have been quoted from both the author's own practice and those of other distinguished surgeons. The beautiful illustrations are all new and have been drawn especially for Mr. Moynihan's work under his personal supervision. The book is a valuable production and adds greatly to the reputation of its eminent author.

Lectures Upon the Principles of Surgery. With an Appendix Containing a Resume of the Principal Views held Concerning Inflammation. By Charles B. Nancrede, M. D. LL, D,, Professor of Surgery and of Clinical Surgery, University of Michigan, Ann Arbor. Second edition, thoroughly revised. Octavo of 403 pages, illustrated. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $2.50 net.

The difficulty with the very great majority of works purporting to treat of the principles of surgery is that they attempt to be too comprehensive, so marring their usefulness to the undergraduate. Dr. Nancrede, whose work is now before us, has studiously aimed to overcome this objection, and has met with unqualified success. His work is not a new one, but for some years has held a place of first importance amongst medical text-books. The appearance of this new second edition, therefore, will be a source of much gratification to those who have found the work so valuable. Much has been added regarding the significance of leukocytosis, the treatment of sepsis and of tetanus, and the after-effects of general anesthesia and spinal anesthesia. By rewriting some portions and by greatly modifying others, Dr. Nancrede has brought his excellent work to a degree of perfection only attainable by the careful observation and study of a rich clinical experience.

Dr. Steven's New Work on the Motor Apparatus of the Eyes.

F. A. Davis Company, of Philadelphia, have the pleasure of announcing the early publication of a work long expected and urgently demanded by the medical profession. It is a Treatise on the Motor Appatus of the Eyes, embracing an Exposition of the Anomalies of the Ocular Adjustments and their Treatment, with the Anatomy and Physiology of the Eye Muscles and their Accessories, by Dr. George Stevens, of New York.

The reputation of the author as one of the most original thinkers and foremost investigators in his profession, and one whose works have exerted a profound influence on the views, not only of oculists, but of practitioners in other branches of medicine, is well known.

Dr. Stevens's work is a systematic development of the subject of adjustment of the eyes. He advances the anatomy and the physiology of adjustments to perspective and the psychology of sight, and at length to the classes of anomalies as they arise from variations from normal types. From his unequaled experience he has evolved a rational and philosophic system of treatment. Thus is wrought into a continuous whole one of the most interesting as it is one of the most important of subjects in the science of medicine.

It is to be profusely and elegantly illustrated in colors and in black and white, mostly from the author's own drawings. The illustrations in Comparative Anatomy are of especial interest.

The book will be found a necessity to the oculist and the neurologist, while to physicians in all branches of practice, to physiologists and psychologists it will

prove a work of much value and interest.

It will be complete in one Royal Octavo Volume of about 500 pages.

The complete novelette in the October Lippincott's is "A Manila Madness." Its author is Frederic Reddale, whose earlier works, "The Other Man" and "A Transaction in Rubies," have also been brought out by the Magazine. His latest production is primarily a mystery story possessing an intense love-interest. The plot is hatched at Manila, but quickly shifts to New York City for the scene of its unraveling. In his portrayal of the character feminine Mr. Reddale seems to be particularly felicitous, and in the dramatic situation he excels. A millionaire, whose one cross in life is a nomadic son, tries to draw up his will so as to control the future of his boy and anchor him to civilixation. In distant Manila the wanderer learns of his father's taking-off and of the fortune that has been left to him —with "a string to it." Remorse and resentment fight for supremacy in facing these conditions. Then something happens —this something is the absorbing tale of "A Manila Madness."

Lippincott's is happy to be able to present fiction by the Hon. John Hay. "The Blood Seedling" is a good story, well written, and rests not only upon the late author's distinguished name, but upon the sympathetic treatment of a strong plot.

In addition to the two longer stories there are eight shorter ones of clever variety. These are "Weiga of Temsgami," an animal story by Cy Warman; "Virginia Potluck," a charming love-tale of the South, written by one of its fair daughters, Sarah Chichester Page; "Jen of Culver's Jump," a human episode, by Robert Gilbert Welsh; "The Bishop and the Front-Door Key," an amusing social sketch, by Helen Sherman Griffith; "His Own Medicine," a humorous story of the Far West, by Caroline Lockhart; "The Grafting of Abigail," by Edward Childs Carpenter—a balloon ascension story; "A Railroad Idyl," sweet and true, by Frank H. Sweet; and "Beyond the Outposts," a search-light on pioneer hardships, in fiction form, by one of Uncle Sam's soldiers who can "wield the pen as well as the sword." It is signed simply "Lieut. L. B., U. S. A."

Maud Howe contributes another delightful travel-paper about "Anacrap" and "One of the Seven Jewels." which keeps the pace of the previous contributions.

The verse of the month is plentiful and of excellent quality; and the bright department called "Walnuts and Wine" produces choicest specimens of human vintage.

The American Monthly Review of Reviews for October contains an unusual number of timely features. In addition to the regular departments, the following are the noteworthy original articles: "The Making of a Modern Treaty of Peace," by Louis E. Van Norman, of the staff of the Review of Reviews, a story of the Portsmouth conference with illustrations of the makers of the treaty; "How St. Petersburg Received the News of Peace," by W. T. Stead, editor of the English Review of Reviews, written from the Russian capital during the first week in September; "Japan's Elder Statesmen and Peace," by Adachi Kinnosuke, with a portrait of Marquis Ito and a statement of the views of the opposition in Japan; "A New Era for the Metropolitan Museum of Art," by Charles de Kay, with many illustrations, being an exposition of the plans of Sir Casper Purden Clarke, the new director; "What the New President is Planning for the University of Illinois," by President Edmund J. James himself; "The Uintah Land Opening," with illustrations; an illustrated story of the progress of "Mexican Water-Power Development," by Thomas Commerford Martin; an interview with President Diaz of Mexico, by Henry Stead, on transcontinental trade; a study of "The Future of British India," by Sir Henry Cotton, who was the president of last year's Indian National Congress; "Switzerland's Fete of the Vine," four pictures of the Fete des Vignerons at Vevay, with explanatory captions; and Mr. Walter Wellman's vigorous and exhaustive analysis of the question "Is American Life Insurance on Trial?" from the standpoint of the policy-holder. There are many noteworthy "Leading Articles of the Month" and other review departments.

Manual of Chemistry. A Guide to the Lectures and Laboratory Work for Beginners in Chemistry. A text-book specially adapted for students of medicine, pharmacy, and dentistry. By W. Simon, Ph. D., M. D., Professor of Chemistry in the College of Physicians and Surgeons of Baltimore, and in the Baltimore College of Dental Surgery; Emeritus Professor in the Maryland College of Pharmacy Department of the University of Maryland. Eighth edition, thoroughly revised. With sixty-six illustrations, one colored spectra plate and eight colored plates, representing sixty-four chemical reactions. Lea Brothers & Co., Philadelphia and New York. 1905.

The publication of the present—the eighth—edition of this manual has been delayed for a year in order to incorporate in it the changes and additions of the new Pharmacopoeia.

This has been done; but, aside from the

alterations thus necessitated the manual has been thoroughly revised and brought up to date in all parts. Several of the chapters on organic chemistry have been practically rewritten, and the matter has been rearranged so as to conform to modern views. An alteration has been made in the colored plates in order to introduce one giving the color changes of the most important indicators used in volumetric analysis and in the analysis of gastric juice. With these changes and additions the manual will fully accomplish its object, viz., furnish the student in concise form a clear presentation of the science, an intelligent discussion of those substances which are of interest to him, and a reliable guide to his work in the laboratory. As heretofore the subject has been divided into seven parts, each one of which contains so much of the matter under consideration as is believed to be necessary for a fair understanding of the subject. At the same time care has been taken to place in the foreground all facts and data which are of direct interest to the physician, pharmacist, and dentist. In the first part treating of chemical physics, the student finds a brief discussion of those physical conditions of matter which have a close relationship to chemical phenomena, and also of the principles which lead to the understanding of the new instruments, such as spectroscope, poleriscope, etc., which he uses in his chemical operations. Electrolysis and the ionic theory are briefly considered from a modern standpoint.

The second part treats of those principles of chemistry which are the foundation of the science, and enters briefly into a discussion of theoretical views regarding the constitution of matter.

The third and fourth parts are devoted to the consideration of the non-metallic and metallic elements and their compounds. While the periodic law furnishes a most admirable basis for a scientific classification of elements, yet their consideration according to the strict adherence to periodicity does not seem to be approved of by the author. For this reason the old classification of metals and non-metals, organic and inorganic compounds, has been retained, since experience has shown to be well adapted for the instruction of beginners in chemistry.

The fifth part is devoted to analytical chemistry and will serve the student as a guide in his laboratory work. Qualitative methods are chiefly considered, but a chapter has been added giving official methods for volumetric determination.

The sixth part treats of organic chemistry. The seventh and last part giving some of the principal facts of physiological chemistry. This was prepared for the benefit of the medical student in particular. Special care has been taken to mention here the most modern methods for chemical examination in clinical diagnosis. As an aid to the laboratory work many experiments have been added which may readily be performed with a comparatively small outfit of chemical apparatus.

The book contains 643 pages and is well bound. It is the largest of any of the editions. This is the best book on chemistry published in this language.

Transactions of the Twenty-seventh Annual Meeting of the American Laryngological Association held at Atlantic City, N. J., June 1st, 2nd and 3rd, 1905. New York. Published by the Association.

The Transactions of this Association come to us this year in its uniform binding, with the exception that it is larger than the former editions. It has 360 pages and makes a very creditable appearance. The President of the Association is Dr. Clarence C. Rice of New York City, and the Secretary is Dr. James E. Newcomb of New York City. Those who are interested in this specialty ought to have this volume in their library.

A Text-Book of Chemistry for the Use of Students and Practitioners of Medicine, Dentistry and Pharmacy. By William Russell Jones, M. D., Ph. G. Professor of Medical Chemistry and Toxicology, and Lecturer on Medical Diagnosis in the University College of Medicine; Visiting Physician to the Virginia Hospital, Richmond, Virginia. Illustrated. Philadelphia. P. Blackiston's Son & Co., 1012 Walnut Street. 1905. Price $2.50 net.

In this volume the author has included all that is needed in chemistry for students of medicine, dentistry and pharmacy, and, at the same time, care has been exercised to avoid the introduction of unnecessary material. The text is based upon a system of teaching which has been successfully followed for nine years; and the subject is presented in an inductive manner, commencing with simple statements and avoiding technical terms, until the student has begun to acquaint himself with his work.

The atomic weights used are those adopted in the United States Pharmacopoeia, Eighth Decennial Revision, taken from the report of the International Committee on Atomic Weights for 1904, and are given in a table in the body of the book. In the description of each element the atomic weight is given in the nearest approximate whole number to that expressed in the table. The references to the United States Pharmacopoeia are based upon the eighth decennial revision, to which this book is

made to conform in regard to official preparations and chemicals. The expression of specific gravity and solubility are based upon the new standard of temperature, as adopted by the Pharmacopoeia, viz., 25 C., 77 F. All statements of temperature unless otherwise specified, are given in terms of centigrade scale. The author has not seen fit to depart from the present system of orthography by the introduction of such words as chlorin, bromin, sulfid, morphin, glucosid, etc., believing that such a system, if rigidly applied, would lead to the formation of undesirable terms, and would interfere with the classification of many active medicinal agents, such as the alkaloids and glucosides.

The book is a most excellent one and is complete and up to date in every respect. It contains 462 pages.

A Manual of Diseases of the Nose and Throat. By Cornelius Godfrey, Coakley, A. M., M. D., Professor of Laryngology in the University and Bellevue Hospital Medical College, New York City; Laryngologist to the Columbia Hospital, the University and Bellevue Hospital Medical Clinic; Consulting Laryngologist to the New York Board of Health; Member of the New York Academy of Medicine, Society of the Alumni of Bellevue Hospital, Medical Society of the County of New York, Medical Society of the State of New York, American Laryngological, Rhinological and Otological Society, etc., etc. Third edition revised and enlarged. Illustrated with 118 engravings and five colored plates. Lea Brothers & Co., New York and Philadelphia. 1905.

The author's many friends have enabled him by their interest to bring out the third edition of this most excellent book. Each article has been carefully considered, and changes made to conform to the advances in diagnosis and treatment. The seventh chapter on diseases of the accessory sinus has been entirely rewritten and many new cuts added, which will elucidate this interesting part of the subject. The purpose of this work in its successive editions has been to provide a compact manual answering the needs of both students and practitioners. Special attention has been devoted especially to those on diagnosis, examinations and treatment. It is of the first importance that the appearances found on examination of a patient should be thoroughly appreciated and that microscopical and bacteriological investigations should be made where the nature of the morbid process is in doubt. Sufficient guidance in the directions will be found in the work. A departure has been made from usual methods of dealing with the subject of treatment. The author has selected from among the multiplicity of medicinal and operative measures those which, in his judgment, are the best, and full details are given for the benefit of those who have not had the advantage of personal clinical instruction.

For convenience a special chapter, devoted to therapeutics, has been added, wherein will be found a classification of drugs according to their local actions, together with indications for their employment. In order to make the work of greater value to those who have acquired some practical knowledge of diseases of the nose and throat, references to those additional remedies have been indicated by heavier type in the index under the treatment of each disease. The book contains 594 pages and has an attractive cloth binding.

International Clinics. A Quarterly of Illustrated Clinical Lectures and especially prepared original articles on treatment, medicine, surgery, neurology, pediatrics, obstetrics, gynecology, orthopedics, pathology, hygiene and other topics of interest to students and practitioners. By leading members of the medical profession throughout the world. Edited by A. O. J. Kelly, A. M., M. D. Philadelphia, U. S. A., with the collaboration of Wm. Osler, M. D., Oxford; John H. Musser, M. D., Philadelphia; Jas. Stewart, M. D., Montreal; J. B. Murphy, M. D., Chicago; A. McPhedran, M. D., Toronto; Thos. M. Rotch, M. D., Boston; John G. Clark, M. D., Philadelphia; James J. Walsh, M. D., New York; J. W. Ballantyne, M. D., Edinburgh; John Harold, M. D., London; Edmund Landolt, M. D., Paris; Richard Cretz, M. D., Vienna. With regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Carlsbad. Volume III. Fifteenth Series. 1905. Philadelphia and London. J. B. Lippincott Company.

This volume of 302 pages is one of the best that we have ever received of this series. It contains many articles of unusual value and the illustrations are beautiful and add a great deal to the value of the book.

The chapter by Dr. George C. Johnston on the therapeutic uses of the Roentgen rays or radiotherapy is very instructive and should be read by every one who is interested in this line of treatment. This article is well illustrated, giving all the apparatus or appliances necessary in the treatment of diseases of the skin, with many illustrative cases showing the results obtained. The book is well up to date and is an excellent representative of these series.

Abstracts of the Leading Articles of the Month.

Treatment of Eclampsia.

Byers, in The London Medical Lancet, says there is no more interesting subject in the whole range of obstetric medicine than eclampsia, and yet, despite the recent advances in every department of medical science, our knowledge of convulsions occurring in pregnancy, during labor, and after delivery, is still anything but accurate, defined, or scientific.

While every case of eclampsia must be treated per se, he recommends the following methods if the attack cannot be warded off:

(1) Treat the convulsions with morphine used subcutaneously. He gives half a grain of morphine hypodermically when the fits commence, followed by ¼ grn. doses as often as is found necessary to control the fits, the idea being simply to keep the convulsions in check. He has given 2 grn. in this way in a period of twenty-four hours. Keep the patient on her side; purge freely (if conscious, a rapidly acting purgative, such as 5 grn. of calomel; if unconscious, insert stomach tube and wash out stomach, and then pour through tube a quart of slightly saline hot water, together with castor oil, elaterin, croton oil in 4- or 5-drop doses, or some saline purgative); use saline infusion, allow no liquids; in a word, as Gooch advised long ago, "take care of the convulsions, and let the uterus take care of itself."

(2) Make an effort to eliminate the poison by purgation, hot packs, and by saline infusion.

(3) If labor has not set in, treat the convulsions but do not induce premature action of the uterus. If labor has begun and the patient is in the second stage and the os dilated, give chloroform and deliver by forceps, if possible, or by turning. If, however, morphine and purgation with saline injections have been tried and the patient is not improving, dilate the cervix and deliver.

(4) For the convulsions after delivery, use morphine, purgatives, and saline infusion.

(5) In the prophylaxis of eclampsia, rest, milk diet, warm baths, and purgatives are the best methods.

Cachexial Fever and Kala azar.

Leonard in The British Medical Journal concludes as follows:

"1. A very marked decrease in the leucocytes is always found in uncomplicated cases of cachexial fever, and when they number below 2,000 per c. c. this is almost diagnostic of the disease, but may rarely occur in true malarial cachexia.

"2. In cachexial fever the white corpuscles are reduced to a greater degree than the red, so that the ratio falls to below 1 to 1,000 in all uncomplicated progressive cases This is rarely so in true malarial cachexia, while a reduction in the ratio to below 1 to 1,500 appears to be quite diagnostic of cachexial from other Indian fevers.

"3. The most marked degree of reduction of the leucocytes, and especially of the polynuclears, is of bad prognostic import, and vice versa.

"4. Red marrow tabloids are of great value in increasing the leucocytes, and this increase may take place during the continuance for months of intermittent fever, and be then followed by cessation of the fever and complete recovery.

"5. High remittent fever is accompanied by progressive deterioration of the blood and general condition, but it may be often to a large extent reduced to the less injurious intermittent form by continued large doses of quinine, combined with red marrow. The best results yet reported have been obtained by those who carry out vigorous quinine treatment."

Pathological Conditions of the Ovaries as a Possible Factor in the Etiology of Uterine Fibroids.

Campbell (Scottish Medical and Surgical Journal) refers to various theories; attention is called to that of Pilliet that the earliest stage was a perivascular deposit of embryonic cells due to increased activity of the tunica adventitia of the uterine capillaries. This theory has been very generally accepted, and has had great support from the careful microscopic examination of early cases.

He says that, while much attention has been paid to the minor details of the uterine arteries, little notice has been taken of the anastomosis of the uterine and ovarian arteries. "It seems not without significance to note that the area of the uterus which has this peculiar vascular supply is the area which undergoes the most characteristic hypertrophy during pregnancy, and, further, is the area of selection for fibroid growths, the most liberal estimate putting cervical fibroids as but 5 per cent. of all fibroids." "So far the supporters of the perivascular theory have explained the comparative rarity of cervical fibroids on the purely mechanical theory that the growth is less likely to take place when the uterine vessels are free from tortuosity." If the growth originates in relation to blood vessels, we are justified in at least suspecting that the cause of the growth is to be found in the blood circulating in these vessels."

Starting from this point of view, the au-

thor has examined the ovaries in twenty consecutive cases of uterine fibroids in which hysterectomy was performed, with the purpose of ascertaining if there were any constant or even frequent departures from the normal, while twenty control cases have been also examined from the post-mortem room.

Without entering into details, it was found that the ovaries removed with fibroids were heavier, longer, broader, and thicker than those removed post-mortem. Exclusive of gross changes, the ovaries removed with fibroids exhibited on the surface a much smaller number of ripe Graafian follicles or recent corpora lutea than those removed post-mortem, and, further, were frequently studded with small cystic areas.

On section, in addition to gross changes, twelve ovaries were found to contain multiple small cystic areas, while in eleven there were in one or both ovaries areas of varying size surrounded by a firm fibrous wall in which ovarian tissue was replaced by white pultaceous material. Microscopically, the comparative rarity of mature Graafian follicles or recent corpora lutea was confirmed.

From the analysis two points stand out in connection with the ovaries associated with fibroid tumours:

1. As a rule the normal function of ovulation was in abeyance.

2. Marked retrograde pathological processes were going on in connection with the Graafian follicles and corpora lutea.

The nature of the internal secretion of the ovary is unknown, but there is no doubt that it stimulates oxidation, and its loss between puberty and the menopause leads to the failure of normal tissue oxidation, shewn by the tendency to adipose deposit in the castrated. It has also been shewn that double oophorectomy in the rabbit leads to a fibrous deposit in the endometrium as well as to uterine atrophy. The internal secretion of the ovary seems necessary to maintain the genital organs in a physiological condition during the reproductive area in a woman's life.

"But if an internal ovarian secretion is necessary for the mere maintenance of the normal condition of the uterine muscle, one would expect that during pregnancy there would be some provision for the increase of this secretion, in order to aid the hypertrophic changes in the uterine muscle demanded by pregnancy. And this is in reality what takes place, for during pregnancy the function of ovulation is, as a rule, suspended in order that the ovarian energy may not be dissipated on the maturation of Graafian follicles whose ova, if discharged, would of necessity be wasted, but may be conserved for the production of an increased internal secretion, and for the full development of the true corpus luteum of pregnancy, a structure to which recent observations assign an important function during pregnancy."

In the ovary associated with fibroids, ovulation is suspended, and the corpora lutea are found to be the seat of pathological changes. Hence it seems not improbable that such ovaries may produce a pathological internal secretion which, by a process analogous to that of the physiological secretion, acts on the body of the uterus in such a manner as to lead to an asymmetrical and irregular hypertrophy of the tissues of the uterine wall.

Treatment of Epidemic Cerebrospinal Meningitis.

Lenhartz (Munch. Med. Woch.) gives his experience with lumbar puncture in the early stages of cerebrospinal meningitis. The writer mentions four cases of considerable severity, in all of which the diplococcus of Weichselbaum was found in the fluid removed by the first lumbar puncture. The lumbar puncture was made in the early stage of the disease, and the symptoms rapidly improved. In one case all the symptoms had subsided by the eighth day after the first puncture. He also mentions the case of a young man who was having attacks of slow pulse and heart failure, with other very unfavorable symptoms. On the fortieth day lumbar puncture was done for the first time, and was repeated several times. Improvement at once commenced, and the patient sat up for the first time on the sixty-seventh day, and entirely recovered. He has never seen any bad effects from the procedure. The author punctures every day or every other day, and withdraws only a small amount of fluid at each sitting. He believes this treatment should be begun as soon as the first serious symptoms occur, in order to get the best results.

Mistakes in Hydrotherapy.

Winternitz (British Med. Journal) states that a large part of the difficulty hydrotherapeutic procedures have had in winning general recognition of their value is due to improper methods of application. Success with these measures requires first, accurate analysis of the deviations from the normal of the organs or function in question, i. e. exact clinical knowledge; second, an understanding of the physiological action of thermic and mechanical stimuli; and third, familiarity with the technique of hydrotherapy. In febrile conditions the mistake is often made of employing baths at too low a temperature for a short time and frequently repeated, instead of longer and fewer but warmer ones accompanied by much friction. In cases of high body temperature with cold

extremities and great vital depression with flickering pulse, subsultus, carphologia, etc., life may often be saved by cold packs to the trunk and the application of heat, friction with alcohol, etc., to the extremities. In the treatment of convalescent and chlorotic patients the mistake lies in the use of too high temperatures instead of making use of the stimulus of more energetic procedures. In sitz baths it is essential to protect the exposed portions of the body from cold, and much judgment is necessary if several forms of treatment are to be applied in a single case.

Syphilitic Coryza.

Gastou (Revue d'Hygiene et de Med. infant) says that syphilitic coryza is one of the earliest and most frequent symptoms of congenial syphilis. The writer gives a very fine picture of an afflicted child. The coryza may appear in two or three days after birth, but usually in the second or third week of life. It is noticed first from the difficulty of nursing and respiration, before the discharge appears, because the affection occurs first in the post nasal space, and the discharge runs down the throat. After a week it advances to the anterior nasal tissues and there is a seropurulent discharge, fetid and mixed with blood, running over the upper lip and excoriating it, as well as the lower one and the chin. Black scabs and red fissures in the skin appear over the scarlet skin. When the child sits up it can breathe, but as soon as it lies down it strangles, becomes purple in the face and nearly suffocates; sleep is impossible and suckling almost so. There is often spasmodic cough and vomiting or disphagia. Diarrhea and asthenia soon are added. The mucous membrane becomes entirely changed in appearance; the epithelium becomes cylindrical and lymphoid tissue appears abundantly under the surface. There are many complications, mechanical, reflex, toxo-infectious, of near and distant organs, ending frequently in the death of the patient. The treatment includes cleansing the nasal spaces, disinfecting them, and preventing complications, as well as antisyphilitic medication of the mother and the child.

A Clinical Lecture on Dilatation of the Gall-Bladder Simulating Ovarian Cyst.

Doran (Brit. Med. Jour.) reports the case of a patient, a multipara, 50 years old. A small swelling in the right side had been mapped out 12 years previously. The tumor grew slowly and became painful. An area of tympanitic percussion-note existed between the liver and the tumor which led to the suspicion of its being an ovarian cyst.

The operation revealed a body shaped like a big cucumber, the lower pole being free whilst the upper pole ran beneath a tongue of liver tissue (Riedl's lobe). About 1¾ pints of a turbid liquid were evacuated. Thirteen big calculi and 217 smaller ones were removed. The cystic duct was obstructed by a big stone which was removed after incising the duct. The incisions in the duct and gall-bladder were closed by suture and the abdominal wound was closed without drainage. The patient made a good recovery.

Lumbar Anesthesia in Obstetrics and Gynecology.

Mueller (British Gynecological Journal), says that in the Greifswald clinic spinal anesthesia with a combination of adrenalin and cocaine has been tried in thirty-two cases of labor. Tropacocaine was used in nine. The collateral effects of the two drugs are different, but not sufficiently so to make one distinctly better than the other. The method proved beneficial in spontaneous labors during the expulsive stage, especially when the contractions were very painful, and also in obstetric operations. It s less to be recommended in eclampsia; oni the other hand it is indicated in cardiac and pulmonary affections, which forbid the use of chloroform. For anesthesia in gynecological operations adrenalin-cocaine and tropacocaine were each employed in ten cases; when the surgical interference did not involve opening the peritoneal cavity the method seemed to answer well, but in peritoneal operations, especially when there were inflammatory changes, its action was uncertain.

Gsatric Ulcer, Rest in the Treatment of.

Boyd, (in the Scottish Medical Journal) does not advise rectal alimentation in acute gastric ulcer, since there is evidence that food injected into the colon finds its way into the stomach, thus preventing complete gastric rest. There is also increased intestinal putrefaction, with possible auto-intoxication. He siphons into the bowel every six hours a pint of normal saline solution, orders an antiseptic mouth wash, and warns the patient against swallowing the secretions of the mouth. No food is given for four to six days, and after this, milk in small quantities. Toward the end of the rest period the complaint of hunger has been no greater than when rectal alimentation was given. Most patients had a feeling of well-being and an absence of pain. Lavage of the stomach in hæmorrhage is advised, the water being heated to 104 deg. or 105 deg. F. In chronic ulcer complete rest should be persisted in as long as the general nutrition permits. The patient should be kept in bed two months and on restricted

diet much longer. In pyloric stenosis, gastro-enterostomy, by resting the ulcer, will effect a cure. If there is no stenosis and the ulcer is on the pyloric third of the stomach, gastro enterostomy may cure by giving the ulcer rest, but according to present experience it will not do so if the ulcer is outside the pyloric third. In such cases excision may result in benefit.

Appendicitis in Pregnancy.

Schoemaker (Zentralbl. f. Gynak.) in a discussion on this subject states that he had attended 150 cases of appendicitis; 80 of these were in female patients and in two the patient was pregnant. Both these cases fared badly. The first patient had symptoms of appendicitis in the fifth month; five days after the first attack of pain, as a relapse occurred, Schoemaker operated. The author opened a large abscess near the appendix; the patient died of sepsis. The second patient had also been ill for five days before he was called in; her general condition was very bad. The doctor removed a gangrenous appendix; there was a small abscess connected with it. The patient aborted, and then a retro-uterine abscess developed and opened into the rectum. Convalescence was slow. Pompe van Merdervoort twice removed the appendix for habitual abortion. There was a difference of opinion about the treatment of appendicitis in pregnant women. Treub held that the fact of pregnancy did not call for operative interference where surgical indications were absent.

The Blood Changes Following Typhoid Inoculation.

Leishman in The Journal of the Royal Army Medical Corps mentions the results obtained in estimating the blood changes in eighty-six members of a regiment vaccinated with typhoid serum as a prophylactic against the disease. The inoculations were carried on for about one month. The vaccine was made from a strain isolated from the spleen, and about five years old, being of low virulence. The culture flasks were incubated for forty-two hours, tested, mixed, and sterilized. They were then standardized by counting the bacilli. He and his assistants tested the dose on themselves, and found 0.1 cubic centimeter sufficient. The men were divided into groups of five to eight men. Their blood was tested to ascertain what changes had taken place in it. Even very small doses of vaccine caused a remarkable development of protective substances in the blood. Four weeks after the first inoculations the amount of these substances remained considerably above normal. In no case did the reaction appear excessive. At the end of forty-eight hours all symptons had disappeared, except in a few cases, in which there was pain and tenderness at the site of inoculation. The reaction was proportionate to the dosage. The largest doses produced the largest amount of protective substances. There was no evidence of a negative phase on first or on reinoculations. The interval between the first and second inoculations was eleven days. At this time the protective substances are rapidly increasing, and reinoculation stimulates rather than retards their further development.

Cerebrospinal Meningitis With Relapses.

Letulle and Lemierre (Le Bulletin Medical) report a case of cerebrospinal meningitis due to the organism of Weichselbaum, in which there is a history of relapses. The first attack, which was serious, lasted twenty days, at the end of which defervescence took place brusquely. For a month it seemed as if the patient had entirely recovered; but suddenly the symptoms of meningitis reappeared, accompanied by severe general symptoms. Five days after the course of the disease followed the same order as in the first attack. Twelve days later there was a second relapse, which ended in definite recovery. However, the patient still has stiffness and trouble in walking. The cephalorhachidian liquid which was withdrawn at the beginning of each attack was distinctly purulent. At the time of recovery in each instance it had become serofibrinous. The presence of the meningococcus was determined in the cephalorhachidian liquid during the first two attacks. During the second relapse it could not be found. The organism did not prove virulent for a mouse, into the peritoneum of which it was injected.

A Case of Vagitus Uterinus.

Fraser in the Glasgow Medical Journal reports this case. The mother, a primipara, aged twenty-five, had been in labour for a week. The membranes had ruptured before the nurse arrived. The pains were weak and infrequent, and the patient was exhausted. The pulse was soft, small, and 116. On abdominal examination the head was found to be presenting and engaged, but both ends of the head were equally accessible. The position was dorso-anterior, with the occiput to the left. The fœtal pulse was 120. The vagina was small and the perineum rigid. The os was the size of a crown-piece and unyielding. The brow was presenting. Attempts to flex the head proved unsuccessful. With the patient in the genupectoral position, the attempt was repeated; but just after she assumed the position a series of plaintive cries came from the vagina. The patient recognized their source, and they were repeated until operative interference was begun. Under chloroform the cervix was manually dilated, and a foot was brought down. As there were

no uterine pains, the child was delivered by intermittent traction, and after artificial respiration and injections of strychnine, was resuscitated. The time between the first cry and delivery was an hour and a half. During delivery all fresh supply of air to the child was necessarily cut off. Apparently the placental circulation was maintained by the left ventricle alone for more than three-quarters of an hour.

A Case of Malignant Endarteritis after Gonorrhœa, Simulating Disease of the Pulmonary Valve. With a Note on the Cardiac Complications of Gonorrhœa.

Furth and Weber, (The Edinburgh Medical Journal), report the case of a man of twenty-seven, had twice contracted gonorrhœ, the last time in January, 1901. About two weeks before admission to hospital (May 21, 1901) the discharge suddenly ceased, and he complained of rigors, recurring once a day, headache, etc. The heart was not enlarged; the apex beat was in the fifth interspace. At the apex the heart-sounds were normal. To the left of the sternum, in the second left interspace, a rough double murmur was audible, at first suggesting pericarditis. The murmur was rendered more evident by pressure with the stethoscope, and was audible over an area covered by a five-shilling piece. It was not conveyed into the veins of the neck, and there was no carotid throb. The lungs were normal, and nothing could be detected amiss as regards the abdomen. There was albumen in the urine, but no other abnormality could be made out, except that some urethral threads could be detected. Microscopically, granular casts were found. No gonococci could be detected in the urethral threads. There was slight leucocytosis; hæmoglobin content, 100. The patient remained seven months in hospital before death. He gradually became feebler, but otherwise the symptoms continued nearly constant. The fever was of an irregular intermittent type, with rigors. Neither quinine nor antipyrin nor pyramidon had any effect on the fever. And, during a fortnight in August, the temperature became almost normal when no antipyretic drugs were being used. The murmurs continued throughout, and the diastolic element became more marked, more long and rolling, and having its maximum intensity in the second left interspace, about 1 inch to the left of the sternum. It was loudest during the pause between the end of inspiration and the commencement of expiration. It started immediately from the pulmonary second sound, the latter being distinctly audible. Both sounds could be heard over the aortic area. During the later stages of the illness the cardiac dulness was considerably increased to the right, and to some extent to the left. On June 1 the spleen found to be enlarged. Repeated attacks of pulmonary embolism occurred between June and August, and the albuminura increased. After November, ascites and œdema set in, and diarrhœ became troublesome. Inunction with Crede's ointment was tried for about fourteen days, but no good effects ensued. At the post-mortem examination the heart weighed 15 ounces, and there was dilation of cavities, especially of the right ventricle. At the level of the valves the circumference of the pulmonary orifice measured $4\frac{1}{2}$ inches. None of the valves were diseased. On the anterior wall of the pulmonary artery, about $\frac{3}{4}$ in beyond the valves, was a rough outgrowth, rather oval in shape, about 1 inch in longest diameter, and projecting about $\frac{1}{8}$ inch from the surface of the vessel. It appeared to be in all respects similar to vegetations found in the valves in cases of malignant endocarditis. It contained masses of cocci, but no typical gonococci were found. The symptoms seemed to point to disease of the pulmonary valve, and it was thought that there was incompetence of this valve.

Experiments on the Negri Bodies as the Cause of Rabies.

Cardarelli (La Riforma Medica) has experimented by inoculation of rabbits, with material from rabid animals, making the inoculations into the nervous system. The inoculations were made by depositing on the cerebral cortex the virus from a rabid animal. The writer formulates the following conclusions: 1. If nerve matter from a rabid animal be deposited on the cerebral cortex, the virus remains localized on that spot for a great part of the period of incubation, and never leaves this location even when the infection becomes virulent in other parts of the nervous system. During the first few days the virus becomes attenuated. 2. If we deposit on the cerebral cortex of a rabbit, the cornu ammonis of an animal which is rich in the Negri bodies, these remain recognizable up to the fourth or fifth day, but take on no changes that indicate biological activity. On the other hand they appear necrocic, as do all the nerve tissues inoculated. Soon it becomes impossible to find the Negri bodies in the leptomeningitis caused by the inoculated tissues, no Negri bodies can be found, even during the period of undoubted virulence. 3. Negri bodies in a pendant drop on a warm slide show no improvement. After being in a collodion sac for some days in the abdomen of a rabbit, they still show no movement. 4. When used in the last-mentioned manner, after some days, they show no alterations that indicate life, but those that denote necrosis.

Acute Puerperal Infection and Hysterectomy.

Berruti (Giornale di Gin. e di. Ped.) says that the mortality from puerperal infection when hysterectomy is done is greater than when the ordinary therapeutic resources are resorted to, since, at the present day, the mortality by these means reaches only 10 per cent. In cases of infection without localization, the enormous mortality when hysterectomy is done, 76.5 per cent., proves that this kind of operation is not appropriate for the condition; curetting, irrigation and injections of the serum of Marmorek give better results. Autopsy in the cases of hysterectomy, which show no localization of peritonitis, show that the operation could not be of benefit in cases of general infection. When there are remains of the placenta or of membranes after abortion, hysterectomy is useful only when executed promptly and by way of the vagina, so as to avoid the diffusion of the infection. Late operation is contraindicated. The mortality under operation is very great. With localization of the inflammation in the periuterine tissue it is better to incise and drain the pus collection. In case of retention of the placenta, emptying and disinfection of the uterus are the appropriate means of cure. In cases of suppurating fibromata, operative perforation of the uterus, or suppurating ovarian cysts, radical intervention is a necessity, but such cases are not true cases of puerperal infection. He concludes that hysterectomy is not generally applicable to puerperal infection.

Prostitution in Paris as Regulated from 1872-1904.

Butte (Jour. de Med. de Paris) gives the results, as to the lessening of the amount of syphilis, that has resulted from 32 years of regulation of prostitution in Paris. In 1873, in the houses devoted to prostitutes, syphilis attacked 30 per cent. of the inmates. In 1904 it had diminished to 0.6 per cent. This is due to better hygiene, the use of efficacious prophylactic measures, the smaller number of houses of ill fame, and the law against receiving prostitutes that are minors. These young girls are much more easily inoculated with syphilis than the older and more seasoned inmates. The latter have acquired a certain amount of immunity, and rarely become infected. Among the inmates of licensed houses of prostitution the liability to syphilis is extremely slight. Among women who are registered, but live and ply their business as they like, there is much more liability to syphilis, since they avoid the prescribed examinations as far as possible, especially when they have become infected. They may be controlled to some degree by being arrested for non-compliance with the law, and be confined in a hospital when found diseased. There were 6,031 registered women in 1904. Of those who were regularly examined, 51 had syphilis, and 148 among those arrested, that is, 199 in all. Another class is the clandestine prostitutes, especially the minors. Among 3,530 of these, in 1904, there were 349 cases of syphilis, a much larger percentage than that among those who were registered and treated. Hence it may be seen that regulation of prostitution has reduced syphilis materially.

The Treatment of Eclampsia.

Glitsch (Deut. med. Woch.) believes the following is the best treatment:

(1) To deliver the patient as rapidly as possible, and at the same time carefully, without considering the life of the child too much.

(2) To carry out all gynecological manipulations under anesthesia on account of the increased reflex irritability.

(3) To employ scrupulous antisepsis or asepsis in delivery.

(4) To individualize carefully in employing cardiac poisons, such as chloroform, chloral hydrate, morphium, veratrum—using the smallest quantities of each.

(5) To excite as carefully and conservatively as possible the secretory activity of the kidneys, skin, and intestinal tract in order to remove toxins.

(6) To partially remove, at least, or dilute the poisonous substances circulating in the blood by venesection, or by subcutaneous, intravenous, or rectal injection of saline solution.

(7) To employ excitants as camphor, or ether, in threatening cardiac failure.

Some advise hot baths, to be followed by "packing," chloroform anesthesia for many hours, enemata, and, in many cases, subcutaneous injections of morphine, and delivery as soon as this can be carried out without undue damage to the mother. Others believe that the delivery should be undertaken very early—as a rule, immediately after the first fit.

There is much difference of opinion as to the best method of delivery. Duhrssen advises his vaginal Cesarean section when a natural delivery cannot be rapidly carried out without injury to the mother; then there is the classical Cesarean section, which is now fast losing favor; and, lastly, there is the method of artificially dilating the cervix with dilators. Champetier de Ribes' bag finds favor with many, while the metal dilators have also a large following. Of the latter, Bossi's four-bladed dilator, or modification of this instrument, which dilates by a screw is the most advised. Several observers declare that these dilators always cause tears in the cervix, which fre-

quently are of considerable size. Incision of the cervix appears to be considered by the majority as dangerous, and likely to increase the risk of sepsis.

Those who advise a conservative or expectant treatment proceed as follows: Ahlfeld applies a Jaquet packing to every woman who shows albuminuria, dropsy, anuria, and oliguria. This consists of a blanket wrung out in water and a dry blanket covering this. The patient is completely undressed, and the whole body, including the arms, are enveloped in the pack, care being taken not to imped the respiration. The pack is allowed to remain on for about three hours, and some effervescing water is given with milk. Subcutaneous infusion of saline solution may also be carried out to increase the renal activity. The delivery is completed when the os is sufficiently dilated. When the case becomes desperate, the os can be diluted by the "bag," and the membranes should be punctured early. If the cervix is dilated, but not sufficiently to allow the head to pass, it may be incised by scissors, and delivery completed by forceps.

When edema of the lungs and cyanosis begin, bleeding may save the patient's life. Many gynecologists consider that bleeding before the delivery is risky, since one does not know how much blood the patient may lose then. Veratrum viride is said to act well in eclampsia by English and American observers.

A Case of Tubercle of the Choroid Presenting Certain Clinical and Pathological Peculiarities.

Carpenter and Stephenson (British Journal of Children's Diseases) describe the case of a child. Ada S., aged three years, was admitted to hospital suffering from "bronchitis and convulsions." The child had been quite well until two weeks before admission when she was noticed to breathe noisily at night and to be short of breath during the day. The personal history was unimportant except, possibly, for the fact that the child had had measles at the age of twelve months. The parents were healthy and there was no history of tubercle in the family. Upon admission the child had a slight cough but beyond a few rhonchi at the base of each lung no physical signs could be made out in the chest.

Progress and termination:—July 29th, 1903. The spleen can be felt to extend 1½ fingers' breadth below the costal margin. The child has lost 4 oz. in weight.

Aug. 4, 1903. The child's temperature since admission has ranged from 97.6 deg. F. to 103 deg. F. and has usually shown a tendency to rise at night to within 102 deg. F. and 103 deg. F. Respirations have varied from a minimum of 32 to a maximum of 76 a minute. The pulse rate has been from 100 to 160 a minute and it may be noted that the rate, as a rule, has been somewhat less at night than during the morning. The respirations are rapid and somewhat labored and the slightest exertion brings on dyspnœa and cyanosis. Resonant notes all over the chest; a few rhonchi and rales can be heard. Aug. 6th, 1903. Beyond a few bronchitic accompaniments there is little to be heard in the chest, which is resonant. The respirations are very frequent (64 to 92 a minute) and out of all proportion to the physical signs present. The liver and spleen are slightly enlarged. Temperature 100 deg. F. to 102 deg. F.; pulse rate 152 to 168 a minute. Ophthalmoscopic examination revealed the following conditions: Neither optic papilla is well defined; each fundus oculi contains numerous fawn-colored tubercles, discretely arranged in the central region of the fundus. In face of the foregoing discovery, a diagnosis of acute miliary tuberculosis was made on this date, August 6th, and the child died comatose on August 11th.

The autopsy, made within twenty hours after death, revealed acute miliary tuberculosis affecting especially the lungs, spleen, and choroid.

This case illustrates once again a fact that can scarcely be too widely recognized, namely, that by far the most trustworthy sign of acute miliary tuberculosis is furnished by the discovery of tubercles in the choroid coat of the eye. As regards the present case, the progressive wasting, the oscillating temperature, the rapid pulse, the cyanosis, and especially the hurried respirations without adequate physical causes, undoubtedly pointed to acute tuberculosis as the probable underlying cause. The condition could never have been diagnosed without the discovery of tubercles in the choroid.

Case of Alexia with Autopsy.

Bramwell in The Scottish Medical Journal reports the case of a man of sixty-three, suffering from chronic bronchitis, emphysema, and granular kidney. He complained of failing sight, which had existed for a year previously. It was found that there was right homonymous hemianopsas and word-blindness. His intelligence wnt up to the average, though memory for recedevents was defective. He was right-hanaed. Visual acuity was good. There was no weakness of the right hand. He had previously been a good reader; his ability to write was good, but he was never a fluent writer. He understood everything said to him, and he expressed himself flulteny and well; there was no evidence that the auditory speech centre and the motor vocal centres were at all involved. It was found that he had the greatest difficulty in

naming letters and words. This was not due to inability to see the letters, for his visual acuity was good. The shape of the letters he could make out well, but the letters conveyed nothing to his mind. In addition to letter-blindness he had almost complete word-blindness. With the exception of one or two words of one syllable, he could not read any of the many printed and written words shown him, yet he could recognize numerals, making occasional mistakes, it is true. He says that this ability to recognise numerals is not at all uncommon in cases of letter and word blindness. It was a question whether the alexia was dependent upon a lesion of the cortex in the region of the angular gyrus, or whether it resulted from an interruption of the connection with the cortical vision in the occipital lobes. The great distinction between these lesions is that in the second instance (the angular gyrus remaining intact) the ability to write is preserved (pure word-blindness). When the patient was asked to write a simple sentence he did so immediately, but not until the first letter of the sentence had been written for him. He was then able to recall the equivalent visual memories which were necessary for the interpretation of the sentence with written characters. His writing was all but intact. Within five minutes of writing a sentence he was unable to read what he had written, and although he could not read certain words written in large characters on the blackboard, yet after he had traced the words with his finger he was in some instances able to decipher them. The ability to revive the visual memories of words and letters in the visual word centre by the kinæsthetic impressions received during the act of writing is not uncommon in cases of alexia in which the parietal cortex is intact. There was neither hemiplegia nor hemianæsthesia in this case. The symptoms were found in the first instance to be dependent upon an extensive cerebral softening of old standing, and occupying the distribution usually accorded by the posterio rcerebral artery. The fibres connecting the region of the calcarine fissure in the left occipital lobe with the optic tracts were thus destroyed, and hence the right hemianopsia. The integrity of the cortex of the angular and supramarginal gyrus explains the slight interference with the act of writing. There was a somewhat questionable implication of the lower portion of the posterior limb of the angular gyrus, and this may account for the very slight defect in writing. It is clear that the fibres connecting the left occipital lobe and the visual word centre must have been destroyed, and it is probable that the fibres connecting the latter with the right occipital lobe—possibly also with the right angular gyrus—and which pass through the posterior portion of the corpus callosum, were interrupted.

Intestinal Auto-Intoxication and its Effects.

Russell in the Edinburgh Medical Journal discusses the relationship between diet and constipation. Constipation leads not only to putrefaction, more especially of proteid materials, but also to the retention and absorption of products resulting from this putrefaction. It is known that some of these substances have a toxic and injurious effect upon the organism. All such products belong to what is known as the aromatic series, and of these skatol, indol, and phenol are the best known These aromatic products reach the liver, where they combine with sulphuric acid and are eliminated in the urine as ethereal sulphates. Hence the proportion of ethereal sulphates in the urine becomes the measure of the degree of intestinal poisoning present. And the measure of indican in the urine has the same meaning. In this connection the author refers to the advantage due to the use of dilute sulphuric acid with regard to other dilute acids in certain cases of digestive derangement. Two other products of putrefactive disintegration are also met with: cholin and neurin. Cholin forms the basis of the lecithins which are present in various animal structures. In itself it is innocuous, but by the action of bacteria it can be formed into neurin, which is highly toxic. Absorption of this substance causes, with other symptoms, cardiac depression and lowering of arterial tension. The fermentation effects of carbohydrates are far less injurious and less toxic than those due to the decomposition of proteids. It must be borne in mind that putrefactive changes in proteids are due not only to constipation, but also to defects in proteid digestion, whether gastric or pancreatic. And delayed absorption of the abundant peptones, etc., may lead to the incidence of putrefactive changes. As regards the clinical manifestations of intestinal auto-intoxication, perhaps the most usually observed symptoms are those of a "bilious attack." The fact of absorption of toxins in such cases is proved both by the condition of the bowels and of the urine. The class of person liable to suffer in this way often passes, later, into a neurasthenic state, and such patients are too often treated from the nervous side, too little attention being devoted to the intestinal origin of the symptoms. In cases of this description there is often a marked tendency to sleeplessness, and the author gives a prominent place to brain intoxication from intestinal absorption in the causation of insomnia. By treating the intestinal abnormality

it is often possible to deal successfully with the inability to sleep. The abuse of hypnotics is closely connected with ihis side of the subject, and the author points out that the new hypnotics should not be regarded as harmless. An occasional dose of any of them is not followed by any appreciable evil effect, but to the sleepless person they become a veritable snare.

Treatment of Pyosalpinx.

Steffeck (Berlin Gyn. Soc.), says that as a rule the acute forms of inflammation of the adnexa should be a noli me tangere for the attending physician. Of course there are exceptions, cases when the collection of pus continues to grow, and we must interfere. Here vaginal incision should suffice.

Chronic cases should always be first given a thorough treatment by conservative methods. Steffeck has observed particular benefit in giving daily baths for one and one-half hour at a temperature between 20 degrees and 110 degrees Fahrenheit. If this, combined with rest in bed for three of four weeks is of no benefit, or if there seems to be a tendency to recurrence of the trouble, operative measures are advisable.

He prefers vaginal methods when these are feasible. Out of 85 vaginal extirpations of the adnexa death occurred once—1.2 per cent. Steffeck in these cases prefers to work through an anterior colpotomy incision, using the posterior incision only where firm adhesions in the cul-de-sac have to be broken up. Through the anterior vaginal wound even larger tumors may be removed after puncture. Every ligature can be applied under ocular control. It is not necessary that the infundibulopelvic ligament should be particularly long. If the adhesions are thoroughly broken up, it will always be possible to apply the ligature to the ovarian with perfect safety. Certainly a given amount of experience in vaginal work is requisite, but to the skilled operator the laparotomy is superfluous. After the extirpation of the adnexal tumor, the uterus is replaced, the anterior incision closed, and in pus cases the posterior wound drained with iodoform gauze.

In very difficult cases, when such conservative treatment is not feasible or advisable, a radical operation should be done. Out of 25 radical operations he lost one one patient. Mortality, 4 per cent.

Tumors of the Ovary in Children.

Schwartz (British Gynecological Journal,) reports the following: A girl of thirteen was attacked with sudden pain in the hypogastrium, and in spite of violent vesical tenesmus was unable to micturate. The pain ceased when she was put to bed, and in twenty-four hours all the symptoms had disappeared. A second attack came on a fortnight later. The child had never menstruated. Palpation of the abdomen detected an ovoid median tumor behind the symphysis, reaching almost within a finger breadth of the umbilicus, and from 6 to 8 centimeters in diameter. The tumor was smooth and elastic, and was not painful; it was movable and did not fluctuate; its lower pole filled the pouch of Douglas. Neither uterus nor adnexa could be made out. At first the author thought of urinary troubles due to a distended bladder, but the introduction of a sound proved otherwise. The physical examination suggested that the tumor might consist of the uterus filled with blood, but the tumor was movable and the pains disappeared when the girl lay down; moreover, she had never menstruated, and the tumor persisted during ten days' observation. A movable kidney was also thought of, but a cystic tumor of the genital organs seemed more probable, and a provisional diagnosis was made of ovarian cyst. At the operation a dermoid cyst of the ovary was found and removed with a portion of the tube. The patient recovered.

Immediate Treatment of Retention of Urine.

Cathilin (Med. Press & Cir.), says: Acute retention of urine from different causes requires prompt treatment. The usual cause is due either to stricture, to hypertrophy of the prostate, or to acute gonorrhea.

In cases of stricture the passage of a fine bougie is indicated, and around which the patient will urinate. The passage of the small bougie is frequently very difficult, and great patience is necessary. The penis must be drawn well forward and the bougie screwed in, so to speak, until the obstruction is passed.

It may be often necessary to insert three or four bougies up to the stricture, and one of them will finally pass through the small orifice, which is frequently excentric. This bougie will be left in situ twenty-four hours, when gradual dilation may be commenced.

In patients suffering from hypertrophy of the prostate, a large catheter a beguille should be used, and when the bladder is reached it should be left a demeure three or four days, by attaching it to the hair on the pubis. The bladder should not be emptied completely, only six ounces of urine drawn off, and if it appears to be infected, four ounces of a solution of nitrate of silver 1 in 1000 should be injected. The plug of the catheter should be taken out every hour or two to allow the patient to urinate.

In the acute stage of blenorrhagia, medical means should be preferred to the catheter; diuretic infusions, warm enemas,

warm applications over the hypogastrium, warm baths, opium, etc.

In cases where, in spite of repeated attempts, the catheter cannot pass into the bladder, recourse must be had to tapping the bladder with a fine trocar above the pubis.

The point of election is the median line between the symphysis and the pre-vesical cul-de-sac of the peritoneum, and done with the usual precautions the operation is devoid of danger. The instrument to be used is that of Dieulafoy, or, preferably, Potain's aspirator. In this last case the proper working of the apparatus should be proved beforehand. The needle, no. 2, should be passed through the flame and placed in a solution of phenic acid. The patient is laid on a table and pubes soaped, shaven, and disinfected. With the nail of the index finger of the left hand the operator marks a point on the median line at about half an inch from the symphysis, and, seizing the trocar with the right hand, he plunges it in at the exact spot marked by the finger of the left hand, perpendicularly and without fear. As soon as the bladder is penetrated a sensation of vanquished resistance is felt. Aspiration is then adopted, and the liquid flows into the bottle.

The bladder should not be completely evacuated, for fear of provoking congestion of the bladder, or even intra-vesical hemorrhage, and in order to avoid the penetration of some drops of urine into the cellular tissue, the aspiration should be suppressed before withdrawing the needle.

Ringworm of the Scalp Cured by the X Ray.

Sabouraud and Noire (La Presse Med ,) have experimented considerably with microbe toxins and the salts of thallium, with the view of temporarily suspending the functions of the hair papilla. They finally arrived at a solution of the problem by the use of the X-ray, and have had very favorable results. On account of the numerous accidents and permanent alopecia which have followed the use of the X-ray in the hands of many operators, the method as given by Sabouraud and Noire is particularly to be emphasized. The main point in their technic for the employment of radiotherapy consists in the use of the radiometer of Sabouraud and Noire. This consists of a circular wafer of paper coated with an emulsion of platino-cynade of barium in a collodion of amyl-acetate, and has the property of changing color under the action of X-rays in proportion to the quantity of rays absorbed. By comparison of an exposed wafer with a scale of colors it becomes easy to determine the exact amount of exposure necessary to produce a complete depilation without any of the attendant dangers of permanent alopecia. The technic of treatment is as follows: To cure a patch of ringworm of the scalp by the X-ray, place the patch at a distance of 15 centimeters from the center of the focus tube and place at the same time a disc of platinocyanide of borium paper 8 centimeters from the center of the tube. When this disc has taken the color corresponding to the tint "B" of Sabouraud's radiometer, the operation is terminated. About seven days after the treatment a slight erythema results, and in about fifteen days the hair falls out. Cultures show that the fungus is not destroyed, so consequently, to prevent reinfection, the scalp is thoroughly anointed with an ointment containing oil of cade, the following morning the head is carefully shampooed and a weak solution of tincture of iodine rubbed over the entire scalp. A careful examination at the end of thirty days is made to show that no diseased hairs have escaped. The cure requires about three months, and last year over 327 cases of cures followed this form of treatment.

Climacteric Hemorrhage Due to Sclerosis of the Uterine Vessels.

Barbour in The Scottish Medical Journal, mentions the importance of carefully investigating uterine hemorrhage in patients at or near the menopause. The writer discusses sclerosis of the uterine vessels, stating that the condition of the arteries in other parts of the body does not give information as to that of the uterine vessels; anterio-sclerosis is found in them when it is not present elsewhere; the only treatment for this condition is hysterectomy. He classes the cases that have come under his notice under three headings: Cases of arteriosclerosis, usually in women advanced in life, with hemorrhages and other marked naked-eye changes in the uterine wall, but no external bleeding of consequence; cases of uterine hemorrhage so severe as to call for hysterectomy, of which no pathological account is given, or in which nothing was found to account for the bleeding; cases of severe hemorrhage calling for hysterectomy, in which arteriosclerosis is the prominent lesion; while other minor changes in the mucosa are present, such as small-celled infiltration, there is no evidence of hemorrhage or infarction such as characterized the first group. He mentions a case of this nature which came under his care. Nineteen weeks before admission to the hospital this patient had a severe hemorrhage, which began on the day of the expected period, and which continued for sixteen weeks; hysterectomy was performed a week after admission. Ar-

teriosclerosis was the prominent lesion found in the uterus.

Mongolian Imbecility.

Stewart (Brit. Jour. Children's Dis.) reports two cases. They show the characteristic facies—the sloping of the palpebral fissures downward and inward as in the Mongolian races, with chubbiness of face and a snub nose with depressed bridge—squint, and a shortening of the anteroposterior diameter of the head so that it is nearly flat posteriorly and its circumference diminished. The hands are short and the fingers tapering, and rounded at the tip, not broad as in cretins. The circulation is weak. The snuffling, which is common in these cases, and the depressed nasal bridge, suggest syphilis, but other signs of that disease are absent. Dentition is late and often irregular. The child of 13 months has one tooth, that of 19 months has only two, both molars. The older child sat up at eight months and now can stand with the aid of a chair; the younger makes no attempt even to roll over, but will remain sitting if so placed. The old r showed signs of talking at one year, but now says only "dada"; the younger makes similar sounds. The children are apathetic or vivacious, generally good tempered, and can distinguish their parents. The higher grades can be taught to be cleanly quite early. These children are usually born toward the end of the reproductive period, often being the latest in large families. Probably any cause which exhausts either parent, such as alcoholism, syphilis and insane heredity, may lead to Mongolian offspring. These children are liable to congenital cardiac disease, to respiratory affections and to epilepsy. While they can be trained considerably, and the higher grades develop fair imitative capacity, their reasoning powers always remain below normal. No drug is known to affect the condition.

The Diagnosis Between Typhus and Typhoid Fevers.

The London Practitioner impresses the following facts in the diagnosis of typhus: There is no preliminary epistaxis, though there may be bronchial catarrh; the onset is sudden, often with a rigor, the temperature rising to 102 degrees or 103 degrees F. in 12 hours, the pupils are equally contracted; the expression is dull, the conjunctivæ are suffused and the face generally congested; nervous symptoms and great prostration are early pronounced; the pulse is quicker than in typhoid and is not usually dicrotic; the abdomen is as a rule normal—not tender; there is no diarrhea or hemorrhage from the bowels; there are red papular spots which appear from the third to the fifth day on the trunk and extremities. They do not come out in crops. Hemorrhage takes place into the crops later; there is no subcuticular mlottling; coma vigil is not infrequent; the bood does not give the agglutination test; the temperature varies between 101 degrees and 104 degrees for the first fortnight and then comes down more or less abruptly, crisis sometimes occurring.

A Plea for the More General Use of Tuberculin by the Profession.

Anderson, (Brit. Jour. of Dermatology), recommends the more general use of tuberculin in the treatment of selective cases of tuberculosis of the skin, and also reports the cure of a case of tuberculous peritonitis and one of Addison's disease. The writer says that he has used tuberculin continuously since its discovery, in the most suitable cases, and under the precautions adapted to its use, and almost invariably cutaneous tuberculosis has been benefited, while in many of the cases the manifestations have entirely disappeared. There are many cases, in which, from their situation or extent, the X-Ray or the Finsen treatment is unsuitable. Two factors are to be contended with in the treatment of tuberculous disease: first, the tubercle bacillus and its toxins; second, the soil favorable to its germination and development. In order to obtain permanent results, therefore, it is obvious that, in addition to destroying the microorganism, we must by proper medication, simultaneously change the soil on which it flourishes.

The author regrets that tuberculin is not used by the profession in general for diagnostic purposes in cases of suspected tuberculosis, considering the certainty of the test when used on animals for that purpose. With reasonable care it is safe and equally efficient in the human subject.

The doctor mentions two cases of tuberculous peritonitis which were entirely cured, the first, in a boy eight years of age, who had the disease three months and who recovered after twenty-two injections, when there was no longer a reaction and he had gained seven pounds in weight. A cure of tuberculous adenitis in a young woman is also reported. He considers tuberculin "of priceless value" in diagnosis and it sometimes directs our attention to "unsuspected foci of tubercular disease," citing a case of lupus vulgaris of the face, in which, after the injections were commenced, the patient began to complain of pain in the right elbow joint; while, in a case of phthisis with physical signs limited to the left lung, moist rales appeared in the right mammary region. A case of Addison's disease is reported in which the pigment almost entirely disappeared in a month and the patient was so improved and benefited that she left the hospital. Six cases of lupus

vulgaris, with excellent photographs taken before and after the treatment, are reported, and in all the results were wonderful.

He advises the use of old tuberculin and closes with rules and directions for its use.

Diet in Early Pulmonary Tuberculosis.

Price, (Edinburgh Medical Journal), believes it advisable for patients suffering from this condition to take a liberal helping of beef or mutton twice a day, a plentiful supply of sugary food, and also of fatty food in the shape of milk, cream, butter, eggs, and fat bacon. It is advantageous to begin with one pint of milk per day for one week, increase to two pints during the second week, to three pints a day during the third week, and then to keep to this amount, or occasionally to go on to four pints a day. If a patient cannot take ordinary milk, whey may be tried. Koumiss is not advisable when there is active pyrexia, but is sometimes useful in other cases, perhaps, especially, when there is bronchial catarrh. The expectoration should not be swallowed, for one reason, because such a habit is one of the commonest causes of dyspepsia. The food should be eaten slowly, thoroughly masticated, and the patient should rest in the recumbent posture for about half an hour before meals and for one hour after meals. Lack of appetite may be caused by the presence of syrups in the cough mixture. The patient should also be encouraged to eat as much as he reasonably can, and in many cases an alkali with a vegetable bitter taken twenty minutes or so before meals is the best remedy. The following is a useful prescription :—

R Sodii bicarb., gr. xv.
Tinct. nucis vomicæ, *m*vij.
Infus. gentian. comp., f℥j.
M. Sig. : Before the two principal meals of the day.

Or, when a sedative action is desired, hydrocyanic acid in appropriate dosage may be substituted for the nux vomica. In other cases, especially where there is a pale tongue, and flatulence is a prominent symptom, better results are obtained by the administration of acids, with or without strychnine, after food. When there are irritative symptoms, such as pain in the region of the stomach or vomiting, the cod-liver-oil, if given, should be stopped, the bowels should be opened, and bismuth and hydrocyanic acid should be administered before meals. Sometimes morphia is necessary. Where there is a red glazed tongue, with loss of appetite and repeated vomiting, it is better to keep the patient in bed and to allow only liquid diet, and if this is not successful, it may be necessary to feed the patient by the bowel for a few days.

Epidural Injections in Enuresis and Polyuria.

Freeman (British Journal of Children's Diseases) says that the treatment of this affection in children and adults is difficult. Some authorities condemn all drugs as useless. Others praise certain remedies. Massage of the neck of the bladder or the introduction of a cold sound are procedures hardly to be recommended in girls under the age of 20, and it is in the female sex that the trouble is most common. By epidural injections is meant the injection of the fluid into the space between the periosteum of the vertebra and the membranes of the cord. In young children the difficulty of finding the opening is considerable, but from the age of nine years and upward the little operation is comparatively easy. In older patients it can be carried out without the aid of an anesthetic. In younger ones it is well to administer nitrous oxide or ethyl chloride. The epidural injections stimulate the nerve roots of the cauda equina. In a certain proportion of the cases the results are good, the sphincter regaining its tone, while in others, perhaps one in eight, the treatment is a failure.

The composition of the fluid is a matter of some indifference. The normal saline solution is commonly employed. From 2 to 5 or 6 drachms may be used at a single injection, and in obstinate cases these figures may be doubled. Good results may be obtained after a single injection, but in most cases it is well to repeat it after a day or two. The syringes and needles should be sterile. So far no harm has resulted from such injections.

The injections may be made in the standing position, but it is generally better to have the patient in the ordinary bosition position with the sacrum well thrown out.

A glass serum syringe is suitable for the injection, and it should be armed with a needle of from 1½ to 3 inches in length. The landmarks are the sacral cornua and the tip of the coccyx. Work up from the tip of the coccyx until on either side of the middle line the horns of the sacrum are definitely made out. The membrane stretching between the cornua has to be pierced, and if this be successfully done the needle enters a space, and the fluid, when the piston is pushed home, disappears with the greatest ease. Keep in the middle line and push the needle in a direction upward and forward. If the epidural space is not entered you impinge upon the bony sacrum. It is easy to miss the narrow aperture covered by the membrane, and in quite young children it may be difficult or impossible to find the opening. Sometimes the needle will penetrate the more or less soft structures lying over the sacrum. This occurs from not

keeping the point of the needle sufficiently forward as well as upward. Where there is a triangular depression or pit at the posterior end of the cleft between the buttocks it is a great aid in inserting the needle.

Late Rickets.

Marsden, (Edinburgh Med. Jour.) reports a case, no family history of similar trouble. Since birth she had been small and under-developed. In infancy she had a large abdomen, diarrhea, vomiting, and very offensive stools, but no bony deformity. First tooth cut at 8 or 9 months, last at 3 years. Sat up at 6 months, crawled at 15, but could not walk until 2 years. She would eat any amount of meat she could obtain, and table salt by itself, but no vegetables. When 18¼ years old she seemed much exhausted after a long walk, and thereafter was easily fatigued by walking. Two months later she began to have pains in the legs, afterwards in the arms and back. At 18½ the ankles and knees were swollen; the left leg began to bend inwards at the knee, and soon after the right bent outwards, and the wrists became swollen. At 18¾ years she showed the general development of a child of ten or twelve, except the breasts, which appeared normal. The teeth were extremely irregular; the long bones showed the characteristic enlargements of rickets, with gnu valgum on the left side and genu varnum on the right. The extremities showed great tenderness, and the muscles were very weak. The case is most unusual in that the active signs appeared so late in life. A marked alteration observed was in the excessive width of the epiphyseal cartilage, which, instead of being about one-twelfth of an inch across, were at least five or six times as broad. He says that the measurement of this cartilaginous zone, with the aid of the x-ray, may be a reliable test for the diagnosis of rickets. As to whether rachitic manifestations are ever visible for the first time in later years, there are three possibilities: that it occurs at the later period in life in an individual previously healthy; that an attack of rickets in infancy does not completely subside and a relapse occur; that the infantile rickets may be entirely recovered from, and after a variable period of normal growth a recurrence take place. He says that even apparently primary late cases may in future be shown to have exhibited previous rachitic changes, and that the supervention of rachitic bony deformity after a prolonged period of normal growth must be a great rarity if it occurs at all.

Appendicitis in Children.

Dun, in the Glasgow Medical Journal, says that appendicitis is not an uncommon disease in children. It does not at first tend to be of a more serious type than in adults, but the slighter cases are often difficult to diagnose, and are therefore apt to be overlooked. He urges a closer attention to recurrent attacks of colic, and points out the frequency with which diarrhœa and bladder irritation are associated with appendix inflammation in childhood. When several slight attacks of appendicitis have occurred, the removal of the appendix is the best and safest treatment. Where localized peritonitis is present, operation should be delayed until the quiescent period is reached, but pus formation must always be suspected and carefully watched for during the waiting period. Should abscess formation take place, immediate operation is demanded, but undue risks should not be run in attempting the removal of a firmly adherent appendix under such circumstances. The administration of purgatives and opium is not without risk, and is, the writer considers, best avoided.

Typhoid Fever in Infancy.

Grunbaum (Brit. Jour. of Children's Diseases) contributes an analysis of 36 cases treated in the London Hospital during the last two years. The most striking point was the short duration of the pyrexia, the average being eleven days after admission into the hospital. Diarrhœa was noted in 5 cases, while a history of the same complaint before admission was obtained in 10, though not improbably this was somewhat influenced by use of home remedies. The characteristic lassitude was often absent. Distention of the abdomen was present in all but two cases. The spleen was felt below the costal margin in 17. Spots were observed in 21, and bronchitis in the same number. There were no relapses. The point emphasized is the frequent mildness of typhoid fever in infants and the difficulty in diagnosis. For this reason the writer would consider all doubtful cases as infectious and treat them accordingly.

Cold Affusion in Delirium Tremens.

Broadbent, (Brit. Med. Jour.) has used cold affusion in delirium tremens, always with immediate success, but the treatment does not seem to have found its way into the text-books. The patient is stripped naked and lies on a blanket over a waterproof sheet. A copious supply of ice-cold water is provided, and a large bath sponge dripping with the iced water is dashed violently on the face, neck, chest and body as rapidly as possible. He is then rubbed dry with a rough towel, and the process is repeated a second and third time. He is turned over and the wet sponge is dashed on the back of the head and down the whole length of the spine twice or thrice, vigorous

action with a bath towel being employed between the cold water attacks. By the time the patient is dried and made comfort able he will be fast asleep.

A man of about thirty was addicted to alcohol. After a week of continuous drinking he had delirium tremens, or, perhaps more strictly, hallucinations; he was more violent and had less delirium ebriositatis, since, with characteristic tremor than is usual in delirium tremens proper. A complication which almost precluded recourse to opiates or sedatives was the presence of a large amount of albumin in the urine. The treatment was carried out with the result of sound, refreshing sleep and speedy recovery. The albuminuria gradually disappeared.

He has used cold affusion even when there was extensive pneumonia with the delirium tremens. When the patient wakes up the tremor is gone, the relaxed, perspiring skin is warm and dry, and the weak, flickering pulse has recovered tone.

In rheumatic and enteric hyperpyrexia the effect of the cold bath is not simply due to the abstraction of heat. The graduated bath has much less effect than the plunge into cold water, and may have no effect at all unless cold affusion is applied to the head. It is not easy in domestic practice to give a cold bath in these cases, and may be impossible. Affusion by means of a bath sponge, followed up by a wet sheet, may meet the emergency.

The Treatment of Menorrhagia and Hemoptysis by Inhalation of Nitrite of Amyl.

Colman (Scottish Medical and Surgicat Journal) states that in his study of this sub, ject, Dr. Francis Hare, of Brisbane, did no feel justified in deliberately trying the effect of nitrite of amyl on the menstrual flow but that accidentally, in the course of treating a case of angina pectoris, he found that inhalation of nitrite of amyl checked menstruation completely in this patient on several occasions.

This point attracted his attention, as at that time he had a patient suffering from severe menorrhagia, which he had found very difficult to relieve. It seemed to him that a drug which stopped normal menstruation would probably check the excess at least in his patient's case.

From the details of the case and the rel sults of the experiment given by the author in his paper, it would seem sufficient to state that the drug was most successful. By means of it the loss of blood was kept well within normal limits after other methods had failed, and the patient's general condition very much improved.

Amyl nitrite must be looked upon as a distinct help in the treatment of inacessible hemorrhage. Its utility in hemoptysis has been proved by Hare in a sufficient number of cases to warrant a much more extended use than would appear to be the case at present. In menorrhagia, in the one case now reported, the successful use was undoubted, and further trial in similar cases will, in the author's opinion, meet the same success.

There can be little doubt that the sudden lowering of the blood-pressure is the main factor in the checking of hemorrhage by inhalation of nitrite of amyl.

This sndden lowering of blood-pressure allows clotting to take place in the bleeding area, be it ulcerated lung surface or engorged endometrium. The blood-pressure rises again, but gradually, and so the clots formed are not displaced. In short, the action of nitrite of amyl is a very close imitation of nature's method of checking very severe hemorrhage, viz., syncope, clotting in the ruptured vessels, gradual rise of blood-pressure, and return of consciousness, the rise of pressure being not rapid enough to expel the clots.

Lastly, the inhalation of nitrite of amyl seems to have no bad effects on patients, the headache usually complained of being very transient.

Rapid Enlargement of the Thyroid Gland.

Macansh, in The Australasian Medical Gazette, describes a case in which a goitre developed in a few minutes. On the morning of April 5 he was hurriedly summoned to a young woman whom he had frequently attended, and whm he knew well. A few minutes before the patient had noted a swelling of the neck, and at the time he saw her the thyroid was swollen to large proportions. The skin over the isthmus was white, tense, and bulged out well in front of the sternum. The veins over the tumor were prominent and distended. Both lobes were enlarged and tense. No bruit was heard over the tumor. The enlargement began abruptly and seemed to come from under the sternum, and it was accompanied by a choking sensation. The patient called upon her sister to open her dress so as to relieve the pressure. The patient and her family are positive that there was no noticeable swelling in the neck previous to this sudden enlargement. From the time that she felt nervous until the tumor was present not more than fifteen minutes elapsed. There was no exophthalmos, the pulse was 108, temperature 100 degrees, respiration 22. On the following day the patient was feeling quite well, except for a stiff and uncomfortable feeling about the neck. The isthmus was not so prominent and the tumor was much smaller. Two weeks after the enlargement there was still a well marked goitre.

The Thymus in Children.

Brickdale (British Medical Journal) has made a post mortem study of over fifty thymus glands from children, and draws the following conclusions: (1) The usual weight of a microscopically normal thymus gland in a child under one year of age is under one hundred grains. (2) Children suffering from "primary atrophy" or marasmus commonly, but not always, exhibit fibrotic changes in the thymus; the weight and size of the organ are usually diminished. (3) Children suffering from "secondary atrophy" exhibit similar changes, but they are not so constant. (4) Possibly some other factor than mere malnutrition or starvation may produce these fibrotic changes, as in a case where pure starvation was produced by congenital stenosis in the alimentary tract, they were not observed. (5) In cases of acute illness in children fibrosis of the thymus may accompany general wasting. It is difficult in these cases to exclude previous disturbances of nutrition, at any rate, among hospital patients. (6) Enlargement of the thymus and other lymphatic structures in the body may occur as the result of acute toxic absorption (as in diphtheria) or a more chronic condition (as in lymphatism). In these enlarged thymus glands eosinophile cells are numerous, but no special types are peculiar to either class. (7) In some conditions, especially in tuberculosis, cells with basophile or neutrophile granules seem to replace the eosinophiles. (8) In congenital heart disease eosinophiles are not found in the thymus. (9) True hyaline degeneration occasionally occurs in Hassall's corpuscles. (10) Fatty degeneration of the cells is common and appears often to affect the peripheral zone of the lobules.

Struma and Malignant Metastases in Cervical Glands Treated by Rontgen Rays.

Stegman (Munchener medizinische Wochenschrift) reports a case of a woman, 52 years of age, who had a struma of many years standing. She had also been operated upon six months previously when her left breast had been removed for carcinoma. Rontgen treatment was begun in April, 1905, on account of metastases of pigeon's egg size, in the fossa supraclavicularis. The left lobe of the struma was also included in the treatment. At intervals of a week, she was treated by radiation (medium hard tube, current of four amperes, thirty volts, Wehnelt interrupter, Walter's arrangement, focal distance, 35 cm., size of coil not mentioned) for fifteen minutes at each seance. At the fifth treatment, it was noted that the metastases had changed into a doughlike mass in which the glands could no longer be differentiated. The fifth radiation was only eight minutes. May 19, 1905, the sixth radiation was given and continued for fifteen minutes. As a slight œdema was noticed, and the condition had markedly improved, the Rontgen treatment was temporarily discontinued. At this time it was noted that the left lobe of the struma was reduced to one-fourth of its former size, and that the metastases could not be felt. In another case of a girl, 12 years of age, with a large parenchymatous struma, which was steadily increasing in size and causing dyspnœa, two radiations brought about progressive diminution in size of struma and relief from dyspnœa.

Strain as a Factor in Cardioaortic Lesions.

Anderson in the British Medical Journal says that we need only recall how often it happens that the cardiac muscle is insufficient to withstand the requirements of ordinary quiet life, to understand how powerful a cause of mischief severe exertion may be. As to the effect of repeated or habitual exertion within wise limits, it is known that athletic and other exercises, when properly regulated, are beneficial to the heart by producing physiological hypertrophy of the organ and lowering the average of peripheral resistance. Clinically speaking, the military surgeons first directed attention to, and carefully investigated the effects of over-exertion on the heart. It was found that many cases of cardiac trouble existed in the otherwise healthy soldiers. Aside from certain modifying conditions in soldiers' surroundings, which appear to increase the liability to injury from overstrain, the tendency of over-exertion in civil and military life is to produce cardiovascular lesions. Exercises in which the legs are employed are especially likely to be associated with cardiac trouble. These cases of over-strain may be classified as acute and chronic. The former is generally noted in the young, weakly, or untrained as the result of severe or prolonged exertion. The "irritable" heart is more often the result of repeated over-exertion developing gradually. Mechanical stress not only injures the myocardium, but it is also a cause of aortic valvular lesions. It may even damage sound valves. The writer then presents the history of various cases which illustrate the effects of strain in a number of cases. He mentions the extreme danger to older people of indulging in unusual exercise which could have been taken with impunity in earlier years. In the obese there is a condition of chronic over-strain, for there is a relative disproportion between the size of the heart and the work it has to perform. This state of affairs follows from the fact as stated that the size of the heart is propor-

tionate to the size of the skeletal muscles, but the work of the heart is proportionate to the bulk of the body. The toxemia of the acute infective diseases produces serious changes in the myocardium and causes unwarranted exertion to be followed by the most serious consequences. In all cases of acute infection it must be admitted that a broad view of the pathology of the disease is the only safe guide to an appreciation of the state of the myocardium, even in the absence of all symptoms and physical signs of its involvement.

High-Frequency Current and the X-Ray in Pulmonary Tuberculosis.

Barnum (Arch. of Phys. Ther.,) reports five cases that have been treated and carefully details the method of procedure, in the hope that the results will be rendered comparable with those obtained by other operators. The inhibitive effect of the X-Rays on the tuberculous process is utilized by combining one X-Ray treatment per week with the high-frequency treatments. A high tube is used at a distance of 20 inches for a period ranging from five to twenty minutes. The effect is chiefly appreciable in the increased amount of expectoration. The author administers the high-frequency twice or thrice weekly, as may be advisable, for the entire time the patient is under his care. The treatment consists of a thirty-minute rest in a reclining chair or couch which is in circuit with the machine, and is without sensation of any kind whatever; patients frequently go to sleep during the seance. Its effects are an immediate rise of temperature of at least one degree within the time of sitting, anda "feeling of lightness," as it is generally termed by the patients, which is in reality a very slight exhilaration, remaining appreciable during the subsequent forty-eight to seventy-two hours. At the end of a month the improvement is sufficient to give renewed hope and courage to the patient, and from then on the gain is usually steady, being particularly noticeable in the increase of flesh and a remarkable diminution in the number of bacilli in the sputum, as evidenced in the microscopical reports given above. Oscillations vary but little, either by difference in length of spark-gap, exciting force or construction of apparatus. He says that quantity and amperage are keynotes of successful treatment.

Persistent Form of Erythema Nodosum.

Pick (British Journal of Dermatology) mentions two cases in which lesions somewhat similar in character to those of erythema induratum of Bazin occurred in the legs of two young women, aged respectively seventeen and nineteen years. In both cases the calf was the part chiefly affected, and the lesions consisted of subcutaneous nodules, some of which persisted, while others involuted. The histological changes present were confined to the subcutis and consisted of a dense infiltration of round cells, especially located around the sweat-coils and blood-vessels. Many of these cells had spindle shaped or oblong nuclei. Masses of them were present also in the septa between the fat lobes. According to the writer these cases showed a close analogy in their symptoms, localization, and anatomy to the acute erythema nodosum, and differed from the erythema induratum (Bazin), which he believed to be a tuberculous manifestation, on account of its histology, its reacting to tuberculin injections, and the facts that bacilli had been found by Phillipson and inoculation in lower animals had given positive results.

Microorganisms in the Small Intestines.

Jundell (Archiv f. klin. Chir.) has demonstrated that bacteria are seldom found below the vocal cords and that the trachea, respiratory tract, and conjunctiva are free from them. He offers the theory that the condition of the mucous membrane itself is the cause of this autosterility. The fact that it was demonstrated in the Boer war that penetrating wounds through the empty intestine healed more rapidly without surgical intervention induced him to experiment on the sterility of the intestines. The writer examined the intestines of five persons, three suffering from carcinoma and two from a benign pyloric stenosis. In only one case of carcinoma were bacteria found in the small intestines; in the other the intestines were sterile. He says that all mucous membranes possess the property of autosterilization with the exception of the lower intestinal tract and vagina.

The Relations Between Albuminuria and Diabetes.

Lancereaux in The London Medical Lancet says that in his opinion it is an error to suppose that the passage of sugar through the kidneys is the cause of the albuminuria which is found in diabetes, because albuminuria is unusual in pancreatic diabetes, in which the amount of sugar varies between 500 and 1100 grammes in twenty-four hours, whereas it is relatively frequent in fatty or arthritic diabetes, in which the amount of sugar seldom exceeds 100 grammes. There are three pathogenic conditions which might give rise to albuminuria in diabetes. One is an intercurrent disease, especially tuberculosis. The urine is in that case high-colored, turbid, and scanty; its specific gravity is increased, and it is loaded with flocculent albumin and tube casts; the kidney lesion is epithelial nephritis, quite independent of the diabetes, and connected with the general disease.

The second of the three conditions abov

mentioned is arteriosclerosis, with consecutive atrophy of the kidneys. The urine is of low specific gravity, transparent, pale, and abundant; the albuminous precipitate is small in quantity; the kidney lesion is arterial nephritis, which as well as the diabetes is of arthritic origin; uremia is of frequent occurrence.

In the last of the three conditions there is neither any intercurrent disease nor arteriosclerosis. The urine is almost normal in quantity, specific gravity, and color, and it contains neither tube casts nor leucocytes; the albuminuria is generally abundant, and is increased by mental excitement and overwork, but the patient's general health is fairly good and anemia is rare. This third form deserves to be called albuminous diabetes on account of its constant association with glycosuria, and in accordance with the celebrated experiment of Claude Bernard it ought to be attributed to a disorder of the bulbar innervation.

Treatment of Middle Ear Diseases.

According to the Indian Medical Gazette Bulson thinks that the prophylaxis of middle ear disease is too often neglected. Every slight earache should be looked after, constitutional conditions be attended to and proper treatment be given to conditions of the nose and throat. Opiates mask symptoms and should not be used for pain; dry heat will usually suffice. As the pain is due to pressure from congestion, the essential treatment is depletion, and this may be accomplished by catharsis, leeching, the application of carbolic acid and glycerine to the membrana tympani for its osmotic effect, or by direct incision. Bulson does not favour waiting for bulging of the membrane before incising. He has never seen any bad effects from an early incision done with proper antisepsis and precautions, but he has seen delayed cessation of discharge, impairment of hearing and even more serious results from waiting. Summing up his recommendations, he says: 1. The patient should be kept quiet, in bed, and the more active the symptoms the more necessary the enforcement of this measure. 2. Secure a prompt and free movement of the bowels by calomel and salines. 3. Secure depletion of the vessels or the membrana tympani and of the tympanic cavity by leeches applied immediately in front of the tragus, and the osmotic effect of carbolic acid (10 per cent.) and glycerine tampons applied directly against the drum membrane. 4. Cleanse the pharyngeal and nasal mucous membrane with a saline antiseptic spray or douche. Remove any existing hypertrophied lymphoid tissue. 5. Advise cautious blowing of the nose to avoid infection of the tympanic cavity. 6. Apply dry heat for control of pain. 7. Incision of drum membrane under strict asepsis on appearance of pronounced redness of any portion of that organ when accompanied by pain, impairment of hearing, and other evidence of acute inflammation. 8. Following perforation of drum membrane, the use of aseptic dry gauze packing to exclude infection from without and also to withdraw the discharge from the tympanic cavity by capillary attraction. 9. Judicious inflation by Politzer's methods only after the acute symptoms have subsided or after the drum membrane has been opened to facilitate removal of discharges and to prevent adhesive changes in the sound-conducting apparatus.

Local Anesthesia.

Hildebrandt (British Medical Journal) thinks that the employment of these in surgical operations has gone too far, in doing harm to fearful and nervous patients; but on the other hand he fully recognizes the immense advantages in a large number of cases in avoiding the dangers of general narcosis. In deciding between general narcosis and local anasthesia, one must study the patient, and to a certain extent the capabilities of the surgeon must also be taken into account. In turning to the various methods of inducing local anesthesia, he says that Richardson's method of the ether spray has now been replaced by other methods—for example, ethyl chloride. Improvements of this have been introduced in the shape of additions—for example, ethyl chloride with cocaine or eucaine; or in the shape of mixtures of ethyl and methyl chloride—for example, anestyle coryl, and anesthol. But the use of locally-acting anesthetics has been found to be better than the action of cold, and the introduction of cocaine and its allies marks an epoch in this branch.

The dangers of cocaine, especially when injected in concentrated solutions, have caused the surgeon to be cautious in its use; but this danger has been much diminished by the simultaneous employment of extracts of the suprarenal glands. He mentions the method introduced by Reclus, who employed one per cent solutions injected into the cutis, and limited the amount of salt injected to 0.19 gramme. Schleich's method, however, has completely replaced Reclus's; Schleich uses cocaine hydrochlorate, morphine, chloride of sodium, and distilled water, and makes up three solutions. The ordinary solution consists of 0.1 per cent of cocaine, which he employs for the usual skin anesthesia; for deeper, less sensitive structures he dilutes this down to 0.01 per cent; while for hyperesthetic areas he uses 0.2 per cent solutions. The infiltration takes place by first rendering a small point

analgesic with ethyl chloride, then injecting the solution into the skin, forming a wheal, and into the periphery of this again inserting the needle; and so on until the whole area of the field of operation is rendered anesthetic. The deeper layers are treated in the same way; 100 cubic centimeters of the normal solution can be injected without the least danger, for part of the fluid escapes on the incision being made, while the rest absorbs very slowly. The addition of adrenalin in Schleich's local infiltration is also of great value. The operations especially well suited to this form of local anesthesia are: the extirpation of benign encapsuled tumors, resection of ribs, typical operations on the abdomen, such as gastrostomy, etc., as long as one has not to search too much inside the peritoneum, as pulling of the mesentery and omentum causes both great pain and much shock. The removal of malignant tumors and operations on inflamed areas are not well adapted for Schleich's anesthesia.

Typhoid Orchitis.

Blumenfeld (British Medical Journal) has collected 69 observations of orchitis occurring as a complication or sequel of typhoid fever, from which he draws the following conclusions: Orchitis generally appears during convalescence, less frequently in the active course of the disease. It is characterized by a rapid rise of temperature, pain in the scrotum, occasional vomiting, which is apparently reflex. Pain is sometimes insidious, but usually increases rapidly, being situated in the neighborhood of the epididymis and vas. It may radiate into the loins and the inguinal regions, intercostal spaces, and the thighs, both in front and behind. The erect posture or movement of any kind is painful. Examination reveals the presence of swelling on one side, as typhoid orchitis is always unilateral, an important distinction from that met with in gonorrhea. Orchitis ends in resolution or by suppuration (29 out of 69 cases) occasionally by atrophy, which is the least common. The duration varies from twelve to eighteen days, exclusive of suppurating cases. The treatment consists in sedatives and local protection.

Action of the Toxic Agent of Lobar Pneumonia.

Brem, (Bulletin of Johns Hopkins Hospital), gives the following resume of a very valuable paper:

1. Action of the Toxic Agent of Lobar Pneumonia.—Phenomena of the mild action bear the features of stimulation of the central nervous system and cardiac muscles. Phenomena of severe intoxication appear to result from intensified stimulation, or enfeeblement and exhaustion from overstimulation. Death occurs from respiratory insufficiency, terminating in asphyxiation or in exhaustion of the respiratory center, or circulatory insufficiency, which leads, presumably, to accumulation of the toxic agent, and which may induce edema of the lungs or end in exhaustion of the heart muscle.

II. Therapeutics.—Elimination of the toxic agent: Internal hydrotherapy. Amelioration of harmful influences: Fever—external hydrotherapy; pain—ice-bag and analgesics; restlessness, insomnia, delirium—external hydrotherapy, analgesics, and narcotics. Respiratory indications: Heroin or morphine every two hours for a respiratory-rate of 36 or greater; O-inhalation is probably useless and may be harmful. Circulatory indications: Circulatory sedatives probably contraindicated, excepting the nitrates, which may be of benefit during early periods of increased cardiac work. Alcohol indicated in alcoholic cases; may be of benefit when there is no circulatory insufficiency. Circulatory stimulants contraindicated, except members of the digitalis series. The indication is low blood-pressure associated with one or more of three conditions, namely, respiratory insufficiency, small urinary output, edema of lungs.

The Lowering of the Body Temperature in Hyperpyrexia by Means of Rapid Evaporation of Water.

Henry (British Med. Jour.) describes a means for the lowering of body temperature as follows: The patient's bed is covered with some waterproof, over which is placed a sheet of toweling. This toweling, the sides of which are cut in a slant, is braided with jaconet. The patient reclines on the sheet, and if necessary has a warm bottle at his feet. Over the whole of his trunk another piece of toweling is placed in one or two layers, hemmed and bound along its sides with jaconet. A cradle is placed over the bed, to the dome of which is attached a small electric revolving fan surrounded by a wire cage. Affixed to the cradle is a small rose, through which water slowly sprays in fine driplets on to the toweling covering the patient. The fan, revolving more or less rapidly, affects the evaporation of water so that the degree of cold can be regulated to a nicety. After taking the patient's temperature, the electric installation is switched on. A rapid evaporation of moisture lowers the temperature. If there is any surplus of water, it will run down the jaconet drains into a receiver at the foot of the bed. A few large fans in the ward would keep the air pure and cool the atmosphere.

The Indications for Total Abdominal Gastration in the Treatment of New Growths of the Adnexa.

Lenormant (British Gynecological Jour

nal) says that, as far as we know at present, abdominal hysterectomy is indicated: (1) in all cysts of the ovaries or adnexal tumors in which the uterus is involved secondarily; (2) in all cases of ovarian cysts complicated by a uterine fibroma, with the exception of the rare cases of unilateral cysts in young women in whom the fibroma can be enucleated and the uterus preserved. Abdominal hysterectomy is absolutely necessary when an ovarian cystoma has become firmly attached to the uterus, or when such a tumor has a very broad or a very soft and freely bleeding pedicle, or is such that its removal would entail leaving much of the surface of the uterus uncovered, and also for the intraligamentary cysts which cannot be removed if the uterus is to be preserved. Finally, abdominal hysterectomy is, as it were, a prophylactic operation in women near or in the menopause, who have bilateral, multilocular, or even unilateral cysts, the course or anatomical condition of which is suggestive of malignant degeneration. He reports three cases operated upon, the favorable results of which to some extent support his views.

Diabetes Mellitus.

Naunyn (Deutsch. med. Wochnschr.) in a clinical lecture presents in an admirable way the principles which govern the treatment of diabetes mellitus. The object of treatment should be to increase what "tolerance" for sugar a diabetic patient may have. A patient's "tolerance" for sugar is the quantity that he is able to assimilate and is represented by the difference between the quantity of carbohydrate ingested and the quantity of sugar excreted in the urine. Such a determination presupposes a careful weighing of the carbohydrates taken in the food. The degree of tolerance should be determined in every case; without it no clear conception of the case can be reached. The problem in treatment is not only to find the quantity of carbohydrate which the patient can take in his food without causing sugar to appear in the urine, but by avoiding an overtaxing of his power of carbohydrate assimilation to gradually increase this until he can assimilate a quantity carbohydrate which will approach as nearly as possible the normal required by the body.

The diet, for the details of which the reader is referred to the article itself, should contain a sufficient caloric value (2,500 calorics for an individual weighing 130 to 140 pounds), but under no circumstances should be excessive, as too generous a diet is fully as deleterious as undue quantities of carbohydrate. The carbohydrates should then be reduced from day to day until no sugar appears in the urine, the caloric value thus lost being replaced by an equivalent in fats; the proteids should not be increased beyond the quantity necessary for normal individuals of the same weight. In cases in which the tolerance is low, the attempt to make the urine sugar-free may be materially aided by a day of absolute abstinence from carbohydrates. When a satisfactory diet has been reached, it should be continued for at least two weeks. The carbohydrates may then be very gradually increased by adding 50 grams of milk daily, the 24 hour urine being examined after each addition in order to determine the earliest appearance of sugar. If 500 grams of milk can be taken daily without causing a glycosuria, an attempt may be made to substitute bread in the proportion of twenty grams for 300 grams of milk. Further increase is made by addition of milk as before with substitution of bread when a sufficient additional quantity of milk is taken—until the limit of tolerance is reached. Such a course of treatment requires about two months. In this period the patient should gain in weight, lose the symptoms of the disease, and be improved both objectively and subjectively.

This procedure he regards as the actual treatment of the disease. The subsequent control of the diet in such a manner that the carbohydrate limit, as determined, is not over-stepped he designates as "Pflege."

The limit once determined, any form of carbohydrate, in equivalent quantities, agreeable to the patient and which will serve to retain or stimulate the appetite, may be substituted for milk and bread. The urine should be examined at first at intervals of a week, then once a month, and any quantity of sugar above 0.5 per cent. should lead to a reduction of carbohydrates, or even a repetition of the active treatment. Complete abstinence from carbohydrates for 24 hours may cause the urine to remain free from sugar even after resumption of the previous quantity of carbohydrates, and he says such a fast-day, taken at intervals of a week, is especially useful in cases in which the general nutrition of the patient requires the daily quantity of carbohydrate to approach very nearly the patient's limit of tolerance.

Cerebral Symptoms in Measles.

Branson (British Medical Journal) mentions the case of a girl, aged twelve, who was first seen February 25th, the third day of the rash. Previous history good. Three elder children had very severe attacks of measles and an elder brother nearly died of tubercular meningitis. The patient's temperature had never been above 102.5 degrees F. She had severe gastric disturbances. On February 26th, while sitting up

in bed, she fell back in convulsions. These lasted half a minute and unconsciousness followed. The author saw her half an hour later. She was irritable and restless, though still unconscious. The pupils were somewhat sluggish to light. This condition persisted until the afternoon of February 27th, when she began to sleep for short periods. February 28th she was better and able to swallow liquids. Beginning March 1st the rash faded quickly and she showed signs of consciousness. From this time on recovery was rapid, the only further symptoms being a lapse of memory from February 26th to March 1st and a slight increase in excitability with accompanying muscular twitchings.

The Treatment of Diphtheria.

McCullagh (Dublin Journal of Medical Science) states that the prophylactic treatment of diphtheria comprises the isolation of the patient, the administration of antitoxin to all exposed persons, the destruction or sterilization of all objects in contact with the patient, and the free use of antiseptics by those exposed. The patient should receive large and early doses of antitoxin, perhaps intravenously, and if there is an associated streptococcic infection, antistreptococcic sera may be tried. Antiseptic sprays and washes may be applied locally. Steam inhalations and emetics may relieve dyspnea. Nasal cases should be irrigated. He prefers tracheotomy in private practice. To aid the sera he recommends perchlorid of iron 5-20 m with quinin gr. j every two to four hours. With this may be given potassium chlorate 1 to 5 grains. Complications should be watched for.

A Case of Divers' Disease.

White and Bainbridge (British Medical Journal) report this case. The patient was a man of 38 years, suffering from the usual symptoms of the malady common to divers, the "bends" or transient paresis being a prominent feature. He was under observation for a period of years and finally was readmitted to hospital for cough and weakness in the legs. Death occurred in about nine weeks. Autopsy showed cirrhosis of the liver and advanced tuberculous changes in both lungs. The main interest centers about the condition of the central nervous system in view of his original malady. The brain and spinal cord were removed from the body about twenty-four hours after death and they appeared normal to the naked eye The cord was hardened for six weeks in a mixture of 3 per cent. bichromate of potassium and 10 per cent. formalin; pieces from different levels of the cord were imbedded in paraffin. The staining methods used were those of Marchi and Weigert Pal; anilin blue-black was also employed. The white matter showed no morbid changes either by Marchi's method or the Weigert Pal method. Throughout its entire length the periphery of the white matter presented a vacuolated appearance; this was due, however, to post-mortem changes. As regards the gray matter, a large number of sections from different parts of the cord were examined; many of them were cut serially. They appeared to show that the cells in the lumbar region were fewer in number than usual; the deficiency was most marked in the case of the large cells of the anterior horns. The cells which were present looked healthy, the only exception being that some who saw the sections thought one or two cells showed slight necrosis. The perivascular spaces in the lumbar region were larger than those in the thoracic or cervical regions. Since sections from all parts of the cord were treated in precisely the same way, the larger perivascular spaces in the lumbar region could not be due to shrinkage of the vessels. There was definite thickening of the small arteries in both the gray and the white matter; the patient had been a drinker. No hemorrhages were observed.

Invagination of the Appendix and Ileo-Cecal Valve with Secondary Intussusception of the Cecum and Ascending Colon.

Vitry (Annales de Med. et Chir. Inf.) describes the case of a child having fallen upon his abdomen, was seized fifteen minutes later with violent abdominal pain, and vomiting followed.

The patient was confined to his bed for three weeks, and a physician made the diagnosis of typhoid fever.

Abdominal pain and vomiting continued and the child was taken to the Trousseau Hospital, remaining there eight days. A diagnosis of floating kidney was made. Upon admission to the Pavilion Pasteur an elongated tumor was found, extending from right to left, and somewhat obliquely placed.

The tumor followed the respiratory movements. There was hepatic dulness.

The radiograph failed to elucidate the case. At times the tumor was not palpable. After a renewed attack of enterocolitis the mass again became palpable.

Upon operation the stomach was found to be dilated. In the cecum there was a tumor which was formed by a portion of the cecum and 2 cm. of the appendix, as well as the ileocecal valve, these structures having become invaginated in the cecum. The appendix was about the size of a small finger.

Disinvagination of the appendix and ileum was readily accomplished. Invagination could be reproduced at will by gently

pushing the appendix toward the cecum.

Two stages were noted: First, the passing of appendix and ileum into the cecum, and second, the passing of the mass thus formed into the ascending colon.

The appendix was removed. In order to prevent intussusception of the cecum and colon a longitudinal fold was made in the gut, catgut being used.

Invagination of the appendix is not rare, several cases having been reported.

The sudden onset noted in this instance is exceptional; in most cases of chronic intussusception colic occurs, and diarrhea alternates with constipation.

Diagnosis of this condition is difficult, and errors are very frequently made.

Osteo-Myelitis Due to Dental Caries.

Broca (Journal des Practiciens) describes this interesting case. The patient was a boy of four years. The first sign of trouble was toothache, of which the child complained on June 2d. A physician diagnosed a small dental abscess at the root of the first lower molar. But the occurrence was thought of little consequence, and was forgotten till the child's condition became serious. On July 1st, after a night of fever and delirium, the patient was placed under a physician's care, twenty-four hours of valuable time being lost at this time, before the morning visit of the physician. On July 2d the patient was seen by the writer. In the right pre-auricular, parotid and angulo-maxillary regions there was diffuse swelling, edematous and non-phlegmonous. The skin was neither red nor puffy. There was a slight cloudy discharge from the ear. Nevertheless, the writer did not consider the trouble of auricular origin, for there was no appreciable modification in the retro-auricular region, and it was not anywhere painful to pressure. There was no swelling over the tip of the mastoid. Moreover, all of the swollen part over the ascending ramus and the body of the jaw was exquisitely painful to pressure. The writer considered the trouble to be without doubt an osteomyelitis of the maxilla. Pus was found around the carious inferior molar. This was the portal of entry of the infection, and the prognosis was very grave. As permission could not be gained at once for operation, it was deferred until the next morning. Incision was made along the border of the inferior maxilla. There was no pus, but two teaspoonfuls of a very fetid, brownish fluid flowed out. The effect of the operation was negative. The local swelling was diminished, but the general infection was not relieved. Death soon followed. He thinks that a correct diagnosis, with early operation, would have saved the child, and he urges the necessity of careful attention to a carious inferior molar in a child. Early extraction is indicated if the cavity can not be perfectly filled.

X-Ray Diagnosis of Renal Calculus.

Smart (Brit. Med. Jour.) says the most important factors in determining this point are, the size and composition of the stone, the subject under examination, and the condition of the kidney. A small stone offers less resistance to the rays than a large one; therefore the shadow may be so slight and so small as to be easily overlooked. Pure uric acid calculi offer very little obstruction to the rays, and therefore are the most difficult to detect, but fortunately such stones are rare. Usually uric acid stones have a sufficient coating of oxalate or phosphate of calcium to throw a shadow. The oxalate of calcium stones throws the densest shadow, and pure phosphatic calculi are difficult to see, whereas the urates occupy an intermediary position. The size of the subject is to be more particularly regarded in connection with adults than with children, on account of the greater resistance of the parts in adults. The ratio of opacities between body plus stone and body minus stone approaches more nearly to unity the greater the thickness of tissues through which the rays have to pass. Thus the thinner the patient the more sharply defined will be the negative obtained. The condition of the kidney itself enters largely into the definition of the shadow. Calculi may cause more or less induration of the kidney tissue, which tends to increase the opacity to the rays, and may obscure the stone entirely. Again, the stone may be completely obscured by the dense shadow of surrounding pus. Another point to be remembered is that the nearer the object is to the plate the greater will be the contrast in the negative. It is advised that a second negative be made under as nearly the same conditions as possible after an interval of about three days. Stereoscopic photography in connection with radiography is considered well worth while.

Nocturnal Movements of the Head in Children.

Zappert (Jahrb. f. Kinderheilk.) says that this condition is found in young children and consists of rhythmic vigorous motion of the head, occurring during sleep, persisting, with short pauses, throughout the entire night, or a large part of it, returning nightly, unchanged, for many years. A series of six cases is reported by the author, who finds in them the following common characteristics: In most of the cases the trouble starts during the third year, and is regularly repeated every night. In the morning the child is ignorant of the move-

ments of its head during the preceding night. The movements are as regular as a clock and consist of a vigorous shaking of the head upon the pillow. The favorite attitude of the child during sleep favors the motions. They are in some cases accompanied by pavor nocturnus. It is instructive to note the difference between nocturnal shaking of the head and other forms of motion of this part of the body. From tic it is distinguished by the fact that the latter is developed out of conscious movements, and even in the latter stages consciousness and the will play a part, and that sleep and tic are incompatible. Spasmus nutans which occurs in young infants is usually associated with rickets, never exists beyond the fourth year, and ceases during sleep. Moreover, hysteria must be ruled out, for this always accompanies the state of waking. From stereotypic movements, including habit spasm, the nocturnal movement must be distinguished; the former, as defined by the Frenchman, Cahen, are motions belonging to the somatic or vegetative life, which are coordinate, have no convulsive character, but rather give the impression of purposeful practised movements, occurring over a long period, at first conscious and voluntary, and later automatic and involuntary. The stereotypic movements have been studied mainly in the insane, and there are many types of them, of which katatonia is one. The nocturnal motion of the head may be classed among the habit spasms of children, resembling the latter in the similarity of repetition, and the persistence of duration. It is quite possible that in the genesis of the nocturnal movement, this was an accompaniment of going to sleep, similar to the acts of sucking indulged in by many infants on going to sleep, and which are continued during the latter. In differential diagnosis must be excluded the gnashing of teeth, the sudden pulling together of the body, the throwing about, the spasmodic swallowing, nocturnal epilepsy, pavor nocturnus and somnambulism. In all of these are absent the regular nightly return of the movements, the automaticity and the long duration for years, which are present in the case of the nocturnal shaking of the head.

Experiments Relative to Constipation.

Glaesner in The Klinische Wochenschrift gives a series of experiments relative to constipation produced artificially in animals. In the first series, dogs were given large doses of opium, which limited the actions of the bowels to once in three or four days. In these cases, there were practically no changes in the urine nor any constitutional symptoms.

In the second series of experiments he endeavored to produce constipation by means of intestinal stenoses, tying a ligature around the small intestine so as to leave only a small opening. But this method also failed to produce a more obstinate constipation.

In the third series the desired results were met with. Dogs which had been on a special diet, and under strict observation, until it was determined that the amount of nitrogen ingested corresponded with the amount excreted, were operated upon as follows: A section of small intestine 40 c. m. long was divided at both ends and reversed, the lower end being fastened above and the upper end of the section to the loop below, thereby breaking the chain of peristalsis at this point. The dogs rapidly recovered from the operation, and movements of the bowels secured once every ten or twelve days. The ingesta and excreta were carefully observed, and it was found that the nitrogen and ammonia salts excreted in the feces gradually decreased from the time of operation, while they increased correspondingly in the urine. The dogs gradually lost in weight, developed a marked cachexia, and finally died. This he believes to be an absorption of toxins. The writer says that certain gastro-intestinal disturbances in children, accompanied by constitutional symptoms, can be attributed to stagnation of the feces, and that if the excreta were carefully examined in these cases the diagnosis could be made readily.

The Fate of Parts of Ovarian Tumors, Left After Ovariotomy.

Schroeder (Zeitschr. f. Geb. u. Gyn.) gives in this article the interesting histories of three ovarian tumors. In the first patient a pseudo-mucin kystoma was removed by laparotomy. A very exact microscopic examination positively established the benign nature of the tumor. Three years and a half later the abdomen had to be reopened and general carcinosis of the peritoneum was found. The writer believes that in this case at the time of the first laparotomy small particles of the benign new growth were disseminated in the peritoneal cavity, which later underwent a malignant degeneration.

In the second patient laparotomy was performed, but on account of dense adhesions it was impossible to remove the tumor, which proved to be a cystadenoma of the ovary. The wall of the cyst was sewed into the abdominal wound and the cyst opened. A fistula formed which remained patent for several years in spite of several attempts to close it. At times fecal matter and gas was expelled through the opening. Another laparotomy was performed. But again the tumor proved inoperable, and therefore nothing could be done except an attempt made to extirpate the whole canal,

which lead down into the pelvis. Through drainage was established from the lower angle of the laparotomy wound into the vagina. One year and a half later the abdominal fistula finally closed. A year later it opened again, disappeared later. Seven years and a half after the first operation the vaginal fistula is still secreting, and in the place of the abdominal fistula a hernia has developed. The tumor itself does not show any symptoms of malignant degeneration.

The third case belongs to the group of the rather rare "secondary formation" of a tumor. A dermoid cyst which obstructed the expulsion of the fetus during labor was pushed up into the abdominal cavity. It ruptured and its contents gave rise to the formation of a new tumor. A little more than a year after the confinement the patient returned to the hospital. A tumor of the size of the fist is felt to the right above the pelvic brim. Another immovable tumor can be felt under the left costal arch. Laparotomy was performed. The pelvic tumor was found to be a dermoid cyst of the right ovary. The mass under the left costal arch was fixed to the abdominal wall and removed only with great difficulty. This tumor was made up of fatty sebaceous matter pervaded by granulation tissue which contained a very large number of giant cells.

Surgery of the Posterior Mediastinum, Its Past and Future.

Faure (Journal of the Johns Hopkins Hospital) says that the earlier operations upon this portion of the body were simply tentative and ended in failure. The main reason for this was that sufficient access was not gained to the thoracic viscera. Faure succeeded twice in resecting the esophagus without killing his patient, although both patients died later through other causes. Still he feels that his experience, which has been far more favorable than that of any one else, has pointed a proper line of approach. Others have attempted to operate through an opening made by dividing two or three ribs, beginning with the second, third or fourth, but Faure claims sufficient access can be gained only when the first rib has been divided, when the shoulder, with the rest of the chest wall, can easily be swung out as far as necessary. The posterior mediastinum then opens up like a book, and nothing is easier than to get at the contents of the chest. Faure hopes that in the future we may be able to save the lives of patients afflicted with cancer of the esophagus. Both of his earlier patient died of a slow suffocation, due to the fact that he left a drain in the posterior mediastinum. With each inspiration more and more air penetrated the space, and after a while the inevitable consequence was noticed. In future he would use no drainage of any kind.

Still's Type of Chronic Joint Disease in Children, and the So-Called "Tuberculous Rheumatism"

Weber (British Journal of Diseases of Children) says that Still described the type of chronic joint disease in childhood which goes by his name. Previously it had been confused with rheumatoid arthritis, but is to be distinguished by the accompanying enlargement of the spleen and lymphatic glands, generally of moderate degree. The joint affection is multiple and symmetrical without tendency to suppuration, and without fibrillation of cartilage and osteophytic changes, but with capsular thickening and a good deal of swelling, probably due to effusion around, rather than in, the joints. The hands, feet, knees and cervical spine are most commonly affected.

It is probable that Still took too gloomy a view of the prognosis, having studied chiefly the graver cases, and that many less severe cases of this disease occur, especially in older and less cachetic children, in which great improvement or even cure ultimately results. The following cases serve to support this opinion. In the first one very great improvement took place, and in the second the affection appears to be relatively mild and quite stationary. The first patient is a boy, now aged 7¾ years, in whom the disease seems to have commenced acutely at the latter part of 1900. From November to December, 1900, he suffered from an illness said to be articular rheumatism. Cervical rigidity was noticed at this time, and at one time gave rise to a suspicion of spinal caries. The swelling of the hands was observed shortly before May, 1901, when he came under Weber's observation. The articular affection of the feet became well marked by the end of August, 1901. Under treatment with rest, iodide of iron, aspirin, arsenic, etc., the condition of the joints fluctuated considerably. Occasionally there was moderate fever, and in November, 1901, there was an attack of endocarditis of the mitral valve, the signs of which have persisted up to the present time. In February, 1902, the temperature began to remain below 100 degrees. The child had a good appetite, put on flesh, and seemed happy and free from pain in the joints. In April, 1902, the condition was as follows: There was some apparent enlargement of the knee and elbow joints, but the most marked feature was the symmetrical swelling about the articulations of the hands and feet. In the feet it was most marked over the metatarsus, in the hands over the proximal ends of the metacarpus and over the finger-joints. There was considerable stiffness in the cervical spine. The

heart was enlarged, and there was a mitral systolic murmur. The spleen extended below the ribs, and the lymphatic glands in the neck, axillæ and groins were moderately enlarged. They were freely movable and separate from each other. The liver was also considerably enlarged. In September, 1902, it is noted that the general and articular condition had improved, but there were crackling and signs of effusion in both knee-joints. He was kept under continuous observation, and was last seen on December 22nd, 1904. He then went to school and looked well. The stiffness of the cervical spine had almost disappeared, and movements in the limbs were good. There was still some swelling of the affected joints; he had no pain anywhere. The spleen was just palpable. The axillary glands on both sides were slightly enlarged.

The second case is in a girl, 12 years of age, who came under observation in May, 1904. She presented, broadly, similar features to the first case, except that the spine was unaffected and that there was no cardiac lesion. There was no fever, and the general condition was good. A diagnostic injection of tuberculin was made, and she gave a positive reaction. It must be noted that the general reaction was not accompanied by any local reaction in the joints. At present (February, 1905) her general condition is much the same as when first seen.

The writer says that these cases may very possibly belong to the "tuberculous rheumatism" described by French authors—that is to say, a joint lesion set up by tubercular toxins generated in some other part of the body, acting on individuals peculiarly susceptible.

Radium and Vision.

The Edinburgh Medical Journal deals with this subject and says though radium gives out light producing rays, it is not self-luminous in the sense of making itself visible. If radium be brought even near to the eyes in ordinary daylight it gives rise to no special sensation; but if this be done in a dark chamber, with the eyes in a state of "dark adaptation," a strange, weird, ghostly seagreen light is seen, but the substance itself is invisible. If an eye, then, from opacity of cornea or lens is "blind," can those rays help it to see? Not directly, it seems for two reasons: First, that to give rise to this light at all the radium must be near the eye, and after a very little time proximity to radium is decidedly dangerous to its integrity; second, that the radium rays pass through all tissues, eyelids, cornea (even when it is "opaque"), bones, etc., so that it is impossible to localize the source. If a candle is held up above one's head, one knows its situation because all but the lower reaches of the retina are protected from its rays, but radium rays passing through everything, this localization is not possible.

But radium causes many substances to fluoresce, and attention was next turned to the platinocyanide screen. It may here be remarked that it is not improbably by means of fluorescence that the radium rays are visible at all, for it has been shown (a) that the crystalline lens and the retinal tissues themselves are caused to fluoresce, and (b) that an eye whose lens has been extracted "sees" radium more readily than one whose lens is in situ. Radium has also a direct action on the retinal purple, bleaching it even in the dark, but that has probably nothing to do with the question of vision. By placing a morsel of radium in the neighborhood of one of these screens, London, having taught his patients to observe the fluorescent light, next endeavored to get them to appreciate form. On the screen, partially covering it, he placed large letters and figures (a circle, triangle, etc.) cut out of a metal plate; where the metal was, no fluorescence of course was, and with some trouble he got his patients to recognize these letters, and by and by to add one to another and so make syllables, words, and even short sentences. A little reflection will show how this must be a slow process, for the letters had to be large, as the fluorescent rays appear incapable of refraction and could not be focused upon the retina; unless, therefore, the figures had been of considerable size, they could not have been interpreted by the retina at all. One letter at a time was all that could be employed. Those who had formerly been able to read and write were naturally more easy to teach than those who had not, but even these were taught to write by tracing out in the air with the finger the form or movements of the screen.

But when all is said and done, what these patients perceived was, as is clearly pointed out by Greeff, not radium rays, but light called forth by radium, and none of this can be perceived save by eyes which are capable of perceiving light in ordinary ways. In all probability, therefore, with a bright light and large cardboard or other letters, London could have achieved very similar results. The case stands thus: If the patient is able to perceive light, he can see the fluorescent screen, and probably the silhouetted letters; if he is unable to know light from darkness (e.g., from optic atrophy), we have no reason whatever to suppose that the abnormal stimulus of radium could help him, and manifestly the platinocyanide screen is of no avail.

So far, then, as we have gone at present, radium is not available to assist those who

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are so unfortunate as to have lost their sight. As to the future, considering the wonderful developments and "miracles" of late years, such as wireless telegraphy, it is best not to prophesy, but merely to say that we have no reason to expect that it will ever be.

The Digestion of Farinaceous Foods in Young Infants.

Heubner in the Medical Press and Circular says that the generally accepted belief is that in infants under six months of age there is no provision for the digestion of farinaceous foods is erroneous. Schiffer has found that when starch had been kept in the mouth of an infant five minutes the saliva did convert the starch into sugar. Twenty-eight experiments have been made of collecting the ptyaline secretion from the mouths of infants and testing the action outside the body, the children all being under nine days old. Of these twenty-eight experiments, twenty-seven gave positive results. In a third series of experiments an extract from the glands was made use of, extracted as quickly as possible after death. In this way it was possible to determine the function of the special glands. In a child only a day old, traces of ptyaline were found in the salivary glands; but, on the other hand, no trace of it was found in the pancreas in children of ages up to three weeks. A fourth method of investigation was by examination of the fæces of children that had been fed on starch. The starch was found least in children of ten to sixteen months old, but even earlier in life a very little was found.

The experiments made justified the assumption that new-born infants, but certainly children of some weeks old, secreted material capable of converting certain quantities of starchy food. The reluctance to give starchy food to infants lay rather in the daily experience than in physiological data. Practical experiments, however, were in favor of the digestibility of starch in early life, for, if Jacobi recommended a mixture of one part of milk and five of barley meal, his experiments must have taught him that the mixture was digestible. As there was a doubt on the point, he thought it should be decided by investigations. After an interval of several hours after the last time of feeding with milk, starchy food was given to children, and in exactly the same intervals as the milk food. The starch period extended over two days. The fæces were carefully collected ond dried, and the sugar constituents determined by reduction with copper, and thus the quantity of undigested starch in the motions. The first

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child, seven weeks old, had thirty grammes of rice flour in twenty-five hours, and the analysis of the fæces showed not a single trace of changed starch; it must, therefore, have been wholly digested. In a second child, forty weeks old, fifty-three grammes of flour were given, equal to forty grammes of dry starch. The first stool containing the starch fæces was passed in eighteen and a half hours. The evacuations contained .1687 gramme of dry starch. This child, then, which was, in fact, dying, completely digested forty grammes of starch. The examination post-mortem confirmed the result. A third experiment was made with a child a year old. In forty-eight hours seventy-nine grammes of dry starch were given in the form of rice meal with butter; 79.7 per cent of the starch introduced was digested. A similar result was obtained with oat flour.

Peculiar Abdominal Tumor.

M'Arale (Dublin Medical Journal) describes the case of a young woman, aged 23 years, suffering from an abdominal tumor. For over a year she had been in the habit of eating hay. She complained of morning sickness, vomiting after solid food, particularly meat, and occasional headaches. The tumor extended about 1½ inches below the umbilicus, was hard, and when fixed, dull on percussion. It was readily movable upward. The author operated, opening into the stomach midway between the lesser and greater curvatures, at the junction of the middle and pyloric thirds of the stomach. A sour-smelling fluid extended. The tumor was grasped and exised and removed. Some pain and restlessness followed operation, but the patient made a good recovery. The mass of hay was in two parts, which were connected; the tail of the smaller tumor extended into the duodenum. The larger tumor was over 1½ lbs. in weight, and the pyloric one nearly ½ a lb. They measured 16½ inches in length and 3½ inches in breadth. The circumference at the largest point was 10 inches. The fibers of the mass were very strong, were not masticated, and, owing to their rigidity, the pylorus resisted their passage.

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The Operative Treatment of Tuberculous Disease of the Knee Joint.

Monsarrat in The London Medical Press says that the great importance of the early recognition of tuberculous foci in the neighborhood of the lower epiphysis of the femur and the great value of early surgical interference are strongly urged. Cases are cited. The symptoms of tuberculous epiphysitis are very definite. They are: Enlargement of the femoral extremity, usually chiefly affecting the inner side, with some swelling of the overlying soft parts; complaint of dull aching pain; tenderness on handling or percussing the epiphysis, and a normal distinctness of the parapatellar depressions. Passive motion of the joint is either unattended by pain or causes this to only a slight degree. Such a focus can be reached, removed and cured without opening the knee joint.

The operation of erasion of the joint in the synovial and capsular forms is considered to be entirely satisfactory as far as recovery from the disease is concerned, even if it be found necessary to repeat it. The result as regards the after-usefulness of the limb for purposes of locomotion is usually a useful ankylosis. A movable joint after erasion is not obtained with the frequency that was once claimed. When the crucial igaments have been removed motion is impossible. The risk of permanent flexion is very great unless the quadriceps extensor is well preserved. The author opens the joint by an anterior longitudinal incision, which is placed exactly in the median line, and splits the ligamentum patallæ, the patella and the quadriceps tendon. This incision gives good exposure of the joint cavity and preserves the anterior structures. The risk of recurrent disease due to the overlooking of some of the disease is looked upon as the chief objection to erasion. This objection can be obviated by careful dissection and secondary operations for the recurrence. The results obtained by the author are excellent.

The indications for operative interference are summarized as follows:

1. Cases of tuberculous foci in the neighborhood of the lower epiphysis of the femur should be operated on as soon as the diagnosis is established.

2. Cases of joint disease by extension from the femur should be operated upon as soon as possible if this extension is recent, and if not recent, then when the disease does not definitely retrograde after about two months' fixation of the joint.

3. Cases of primary synovial disease should be operated on when, after about three months of rest, no distinct improvement has taken place.

The University of Louisville, Medical Department.

The vacancy caused by the death of Dr. J. A. Ouchterlony has brought about several changes in the medical faculty. At a recent meeting of the board of directors, the following changes were made: The chair of Principles and Practice of Medicine and Clinical Medicine, which was occupied by Dr. Ouchterlony, was tendered to and accepted by Dr. John G. Cecil. His chair, that of Materia Medica, was given to Dr. H. A. Cottell. The chair of Physiology, formerly occupied by Dr. Cottell, was assigned to Dr. E. R. Palmer.

The next regular meeting of the Seaboard Medical Association of Virginia and North Carolina will be held in the city of Newport News, Va., December 5, 6 and 7, 1905.

The titles of papers should be in the hands of the secretary, Dr. J. R. Bagby, Newport News, Va., by November 15th.

Dr. Junius F. Lynch, of Norfolk, leader of "Medical subject" has selected "The Uric Acid Diathesis" as the title of his paper. Dr. Lomax Gwathmey is leader of surgical subject, "Post-Partum Infections" is the title of his paper.

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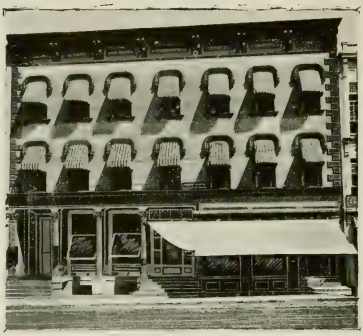

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Cholelithiasis.

Bain (Br. Med. Jour.) from a number of experiments on animals in whom he produced gall-stones, comes to the following conclusions:

1. That gall-stones introduced into a normal gall-bladder become dissolved within a comparatively short space of time, in about eight or nine weeks.

2. That when a mild degree of cholecystitis is set up gall-stones inserted into the gall-bladder do not disappear, although there is always a reduction in weight.

3. That ichthoform, cholelysin, olive oil, and calomel do not appear to have any effect in resolving calculi introduced into a gall-bladder the mucous membrane of which is inflamed.

4. That during a course of the Harrogate old sulphur water gall-stones become disintegrated in cases of cholecystitis experimentally induced.

5. That in the treatment of artificially produced cholelithiasis a mixture of urotropin and iridin has a pronounced effect in causing dissolution of the calculi.

6. That in regard to the action of barium chloride further experiments are necessary to determine its role in experimentally-produced cholelithiasis.

The Prevention of Apoplexy.

The Bristol Medico-Chirurgical Journal in a recent issue contains a paper by Allbutt, entitled The Prevention of Apoplexy. He considers that in a large number of cases of sanguineous apoplexy the kidneys are not granular. Should some of these cases present fibrous changes in the kidneys, then this fibrous change is not that characteristic of Bright's disease. If the analysis of causes could be carried back sufficiently far, the author thinks that a position might be reached where it would be possible to travel on a line of common approach to apoplexy with Bright's disease and to apoplexy without it. For the present the author rules out the Brightian class. He asks, Why have the arteries burst in apoplexy when the kidneys are healthy? In this case the arteries may be the seat of a change known as atheroma or sclerosis; but, although diseased, they have not silted up, as in cases of Bright's disease, but they have burst. The reason of the giving way

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of the arteries is their subjection, not only to the mean pressure of age, but further to the mean pressure of a reluctant peripheral circulation. In other words, they have given way in consequence of the accumulation of obscure stresses, which, if we knew how, might be averted. The cause of the obstruction must be either a narrowing of the calibre of the arteries or stream bed over a very extensive area, or else an increased viscosity, with excessive friction, of the blood itself. He says that if, as regards the mechanism of persistent rise of the arterial tension, we are in the dark, there is fortunately less doubt as to the treatment of the condition. If a patient is to be saved from apoplexy, this can only be effected by long anticipation. It would seem that a tendency to hypertension runs in families; if this is so, then it is most important that vigilance be exerted, especially as regards members of such families. But the condition is so widespread that it cannot be regarded as confined within such narrow limits. It is not rarely met with even in children and young people. In them the arteries may be thickened, but the change affects the muscular coat and not the intima,

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and this hypertrophy may disappear just as a hypertrophy of the heart disappears when the causes of exceptional strain are put on one side. He states that arterio-sclerosis as distinguished from the sclerotic decay of senile involution is not the cause, but the result, of rising arterial pressure. Hence prevention consists in the detection of a special tendency to a persistent mean rise of pressure. Occasional rises occur in all persons, but they disappear before damage to the vessels arises. In others the rise is persistent and very marked; yet, if the tendency be detected early, it may be reduced and kept down. Therefore every adult of the age of forty and upwards should, as a matter of routine, have his blood-pressures measured by the best available instruments. And this investigation should be repeated every five years, say, up to sixty; then, if there is no great increase of pressure, the danger of apoplexy may be put on one side. The author says that, in some cases of rising tension without Bright's disease, arterial spasm is manifest; but in the others, perhaps the majority, this is not the case. In some the condition is that which he describes as the "large, lax, and leathery artery"; in others, the "wiry" artery is present. The first kind may be regarded as arterial tension, for in these the effects of tension are very manifest in the consequent tortuosity of the vessels. In the walls of the wiry vessels this stretching effect is less marked. But the wiry condition is far more difficult to reduce. But it cannot be maintained that there is any difference in treatment between the leathery and the wiry artery group. But the latter group is far less submissive to deobstruent treatment, as generally understood, than the former. He does not find any therapeutical divergence of practical value between burly red-faced people and the spare and pallid. He thinks that pallor and wiry vessels are more frequent among the sedentary. The tendency to overeating at the present day is insisted upon. In any case of persistent rise of mean pressures, the mode of life must be revised; regulated exercise, abstinence from alcohol, and a great reduction in food all are necessary. In these cases the regimen and the waters of certain spas—Harrogate, Carlsbad, Marienbad—are invaluable. The manner in which different people respond to treatment is very various. In some there is much difficulty in obtaining reduction; in others a couple of seasons at a bath, with restriction of diet and regulated exercise, will suffice to put the danger aside, at all events for a time. In others, in spite of all treatment, the rise of pressure, although set

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back, returns again and again. In such, apoplexy is pretty certain to occur in the end. The systematic blood-letting of former times seems to have been a rough-and-ready mode of treatment of morbid rise in blood-pressure. Vasodilator treatment is not satisfactory; as the author points out, it is the cause of the abnormal rise of pressure that requires to be treated. But vasodilators may be of use at critical moments. Should a slight apoplexy occur, all these measures must be carried out with greater determination. He concludes by emphasizing the importance of determining the blood-pressure in middle-aged persons. Instruments should be made use of, as even the most cultivated finger cannot always be trusted. In this way it may be possible to detect the first stages of that process which finally ends in apoplexy.

Miscellaneous.

A Successful Innovation in Consumption.

Probably all physicians would be overjoyed to think that they had discovered a treatment that would in all cases relieve, and in many instances cure tuberculosis of the lungs, without exposing the patient to the expense and discomforts incident to a change of climate, but permitting him to remain at home with his friends and continue under the care of his family physician. There have been so many booms, however, followed by dismal collapses in the line of much heralded cures and specifics for consumption, that the average physician has become both wary and weary of new treatments for tuberculosis, and I would myself not venture to touch upon this theme, were it not that I have watched a certain method of treatment for two years, observed its results in incipient and far advanced cases, and had from its use most gratifying success in appropriate cases.

The treatment is designed to be used by the patient at his own home, and consists of a special nebulizing device, one of the most perfect nebulizers I have ever seen, by which a medicated air is forced into the lungs, the treatment being used for periods of several minutes at frequent intervals during the day, the object being to as rapidly as possible saturate the lungs with the medication, destroy the tubercle bacilli, and permit nature to heal the wounded tissue. The medicament used is a mixture of the oils of gaultheria, thyme, eucalyptus and others which are subjected to an evaporating and electrical process, and transformed into a new fluid which seems to have an almost specific effect upon the tubercle bacilli. In honor of its discoverer, R. L. Benson, the name Bensonizer has been given to this treatment, which certainly has the merit of impressing itself upon the memory from its very oddity.

My observation of the Bensonizer treatment began in the winter of 1903, when it was called to my attention by one of my patients, a Mr. L—, who had been under my care for some time for tuberculosis of the lungs, and who was losing ground rapidly. His sputum had been examined and tubercle bacilli found in abundance. About Dec. 10th, 1903, I advised the use of the Bensonizer treatment. His symptoms at that time were, temperature running up to 104-105 degrees F., pulse 100 to 130, respiration 50 to 40, constant cough night and day, sweating every night profusely. Treatment used, Bensonizer for five minutes every one or two hours night and day. No other medication except a building tonic and keeping the secretions normal and active. He began to improve at once. By the 1st of January, 1904, he expressed himself as being a new man and continued to improve from day to day and on the 1st day of May, 1904, he walked with his family two miles to the World's Fair, stayed all day, standing and walking most of the time, and in the evening walked back home again. His lungs were free from the disease by the first of June, 1904, and at the present date he is still well and hearty. Although a man of 63 years of age, he states that he has never felt better or stronger in his life. He has not used the Bensonizer now for about six months.

Another of my successful cases was that of young B—, sixteen years old. I was called to see him in the spring of 1904, found him with severe cough, spitting up large amounts of caseous tubercular matter loaded with bacilli, temperature 105 degrees F., pulse 125, respiration 30, complexion pale and sallow. I advised his father to get a Bensonizer for him. He said "No," that he had expended $8000 or $9000 upon the boy's mother who had died of the same disease, and he therefore thought it a useless expenditure of money. I then told him to get the treatment and if it did not benefit his son I would pay him back all he expended for the treatment. So he purchased a Bensonizer and his son began at once to use it every one or two hours five to ten minutes at a time, with no other medicines except tonics, and to my surprise he was able to be out and take long walks in two weeks and in one month was able to go to work and has been well and stout ever since. The bacilli all disappeared inside of two months. I advised him to continue the use of the treatment for at least one year. I have also relieved some six or eight other cases in the early stages of the disease during the past eighteen months in from two to six months time, and in several hopeless cases where I have employed it as a palliative, it has made the cough much easier and freer, lessened the sense of constriction and tightness in the chest, and allowed the patient to pass his last days in much greater ease and comfort, I am satisfied, than would otherwise have been the case.

My experience on the whole with the treatment has been very favorable, and I believe that where it is tried with appropriate cases the results will generally be satisfactory. The treatment is furnished to the profession by the Bensonizer Sanitarium Co. of St. Louis, and should certainly be deemed worthy of a trial by any conscientious physician with a tubercular patient whom the ordinary course of tonics, etc., has failed to help. The average consumptive must die or get well at home, and if a single sufferer is helped to do the latter by the treatment I have described, I shall feel that this paper has not been written in vain.

WM. P. BUTTON, M. D.,
4307 Manchester, Ave. St. Louis, Mo.

Recent text books call attention to the most important of modern physiologic discoveries—cell life and lecithin, the phosphorized extract of animal and egg-cell activity. Phospho-Albumen (syrup di-oleyl-lecithin) contains lecithin in such proportions as to commend it to the thoughtful practitioner, who will readily recognize its great usefulness in rachitis, neurasthenia, lymphatism in the cachexias, anemias and all conditions arising from fatty metabolism and malaria. Physicians who are not familiar with this product, which is the pioneer of the animal extracts, will be cheerfully furnished with samples sufficient for a careful trial. Address the Phospho-Albumen Company, Station M, Chicago, Ill.

IN THE TREATMENT OF

ANÆMIA, NEURASTHENIA, BRONCHITIS, INFLUENZA, PULMONARY TUBERCULOSIS, AND WASTING DISEASES OF CHILDHOOD, AND DURING CONVALESCENCE FROM EXHAUSTING DISEASES,

THE PHYSICIAN OF MANY YEARS' EXPERIENCE

KNOWS THAT, TO OBTAIN IMMEDIATE RESULTS, THERE IS NO REMEDY THAT POSSESSES THE POWER TO ALTER DISORDERED FUNCTIONS, LIKE

"Fellows' Syrup of Hypophosphites"

MANY A TEXT-BOOK ON RESPIRATORY DISEASES SPECIFICALLY MENTIONS THIS PREPARATION AS BEING OF STERLING WORTH.

TRY IT, AND PROVE THESE FACTS

NOTICE.—CAUTION.

THE success of Fellows Syrup of Hypophosphites has tempted certain persons to offer imitations of it for sale. Mr. Fellows, who has examined samples of several of these imitations, finds that no two of them are identical, and that all of them differ from the original in composition, in freedom from acid reaction, in susceptibility to the effects of oxygen when exposed to light or heat, in the property of retaining the strychnia in solution, and in the medicinal effects.

As these cheap and inefficient substitutes are frequently dispensed instead of the original, physicians are earnestly requested, when prescribing the Syrup, to write "Syr. Hypophos. FELLOWS."

SPECIAL NOTE.—Fellows' Syrup is never sold in bulk, but is dispensed in bottles containing 16 oz.

MEDICAL LETTERS MAY BE ADDRESSED TO

MR. FELLOWS, 26 CHRISTOPHER STREET, NEW YORK.

K & O. DOUCHE FOR THE APPLICATION OF GLYCO-THYMOLINE TO THE NASAL CAVITIES

GLYCO-THYMOLINE

FOR

CATARRHAL CONDITIONS

Nasal, Throat

Intestinal

Stomach, Rectal

and Utero-Vaginal

KRESS & OWEN COMPANY

210 FULTON STREET NEW YORK

Imitation or Substitution.

A physician in speaking of Glyco-Thymoline imitations, remarked that they reminded him of Oleomargerine—"which might be used when it was impossible to get butter."

"Imitations are at best poor substitutes and I never use them I want the results that invariably follow the use of Glyco-Thymoline—genuine." Sole Agents for Great Britain,

Thos. Christy & Company, 4, 10 and 12 Old Swan Lane, London, E. C., England.

The KEYSTONE of HEALTH is a normally active Liver

In all conditions of

HEPATIC TORPOR

The True Hepatic Stimulant and Eliminant

Sulpho-Lythin

(non-effervescent)

restores normal functional activity of the Hepatic Cells. ¶ It does not irritate or otherwise act injuriously under continued administration. ¶ It corrects Acid Intoxication by overcoming its cause.

Sample and Literature Mailed on Request.

Laine Chemical Co.

Manufacturing Chemists

55 Liberty St., New York

SULPHO LYTHIN SULPHO LYTHIN

I am well acquainted with many of the virtues of Sulpho-Lythin. I have used, personally, six bottles with marked relief for sluggish liver that had taxed my strength and the ingenuity of my medical friends for four years. I frequently prescribe it with benefit in eye, nose and throat cases.

W. H. WAKEFIELD, M. D., Charlotte, N. C.

WHETHER YOU PRESCRIBE OR DISPENSE, SPECIFY

URISEPTIN

URISEPTIN TREATMENT is SUCCESSFUL TREATMENT.

Liberates formaldehyde in the kidneys.

Makes alkaline urine acid.

Makes the urine antiseptic.

Clears turbid urine by killing bacteria.

Keeps the urinary tract aseptic.

Therefore Indicated in CYSTITIS, PYELITIS, NEPHRITIS, PROSTATITIS, BACTERIURIA, GOUT and RHEUMATISM.

DOSE—Tablespoonful night and morning in plenty of hot water.

Full information furnished physicians on request, or 8-oz. bottle will be sent on receipt of 25 cents.

GARDNER-BARADA CHEMICAL CO. CHICAGO. U.S.A.

JOHANN HOFF'S MALT AND IRON

(PEPTONATE OF MANGANESE AND IRON.)

Is an ideal preparation to build up

BLOOD AND BODY

(Each wineglassful contains 1 gramme of Peptonate of Manganese and Iron.)

It is a Nutrient Oxygen Carrying Agent

Contains only a minimum amount of alcohol (less than 3%); is more readily absorbed into the circulating fluid than the iron preparation by itself.

Johann Hoff's Malt and Iron is of marked and certain value in all forms of Anæmia, Chlorosis and general debility.

EISNER & MENDELSON CO. of New York,

SOLE AGENTS.

Sal Hepatica vs. Natural Mineral Waters.

The superiority of Sal Hepatica over the natural mineral waters that are specially recommended in the Uric Acid Diathesis and the various forms of constipation is clearly shown by the following facts: By commingling lithium and sodium phosphates in proper proportions with certain of the "Bitter Water" salts, as represented by Sal Hepatica, a compound is secured that is superlatively more active than either the lithium or sodium salt alone, or, indeed, than any natural mineral water or any combination that can be effected. Recognizing this, the most eminent practitioners latterly have taken to prescribing Sal Hepatica in preference to the natural waters, with the result that the remedial action of the latter is enhanced, the untoward manifestations accruing reduced to a minimum and their palatability materially increased.

Sal Hepatica is very effective in limiting and reducing the amount of uric acid formed within the circulation and excreted by the kidneys, and is very freely absorbed and taken into the blood and as rapidly (along with the chemical products formed) eliminated by the excretory ducts or organs as is readily demonstrated by its presence, after a brief course thereof in perspiration and urine, the latter more particularly being doubled or trebled as to quantity and rendered decidedly alkaline.

Call for a Southern Quarantine Convention.

A formal call was issued on September 16 for a Southern conference on quarantine and immigration to be held in Chattanooga on November 9 and 10. It is signed by twelve Governors and the officers of the Chambers of Commerce of several cities. An object of the meeting is to obtain "some uniform system of quarantine that will allay apprehensions of the people and minimize the dangers resulting from an outbreak of yellow fever." The call declares: "This is necessary if we would save our land from the demoralizing and brutalizing tendencies of a panic-inspired quarantine." The call was signed by the Governors of Tennessee, Louisiana, Maryland, West Virginia, Virginia, Florida, Mississippi, Missouri, Kentucky, South Carolina, Texas, and Georgia.—Exchange.

A Safe Antipyretic.

With the change of the seasons and the accompanying exposure to sudden variations in tempera ture there will be an increase in the number of cases of grip, pneumonia, rheumatism, neuralgia and similar conditions. In all conditions calling for the administration of a safe, reliable and prompt analgesic, antipyretic, anodyne, anti-rheumatic and anti-neuralgic remedy Labordine will be found to give immediate and satisfactory results. Labordine has been used by physicians for many years and is growing in favor as a satisfactory remedy in these conditions. It is a reliable vegetable preparation possessing in great strength the properties for allaying fever and relieving pain. It is preferable to other antipyretics because no habit can be formed by its use nor does it leave any bad after effects. It is a splendid remedy in headaches of nervous or neuralgic origin.

Literature and samples will be sent to physicians on request.

LABORDINE PHARMACAL CO.,
St. Louis, Mo., U. S. A.

The East Tennessee Medical Society.

The fifteenth annual meeting was held at Bristol, Tenn., September 28th and 29th, Dr. J. M. Masters, of Newport, presiding. Dr. George Ben Johnston, of Richmond, Va., addressed the society on the subject of Appendicitis. The election of officers resulted as follows: President, Dr. C. J. Broyles'

of Johnston City; vice-presidents, Dr. C. P. Fox, of Greenville; Dr. A. G. Keen, of Knoxville, and Dr. W. A. Deitrich, of Chattanooga; secretary, Dr. W. M. Copenhaver, of Bristol. The next meeting of the society is to be held at Johnson City in September, 1906.

Officers of the American Medical Association.

President, Dr. W. J. Mayo, of Rochester, Minn.

First Vice-President, Dr. Walter Wyman, Surgeon-General of the Marine Hospital Service, Washington, D. C.

Second Vice-President, Dr. K. A. J. Mackenzie, Portland, Oregon.

Third Vice-President, Dr. Eugene S. Talbot, Chicago.

Fourth Vice-President, Dr. E. Denegre Martin, New Orleans.

General Secretary, Dr. George H. Simmons, Chicago (re-elected).

Board of Trustees, Dr. E. E. Montgomery, Philadelphia, Pa.; Dr. A. L. Wright, Carrol, Iowa; and Dr. H. L. E. Johnson, Washington, D. C.

Oration on Medicine, Dr. F. B. Shattuck, Boston.

Oration on Surgery, Dr. Joseph D. Bryant, New York.

Oration on State Medicine, Dr. W. H. Sanders, Montgomery, Ala.

Boston the place of session 1906.

The New Orleans Health Association was organized at a meeting of citizens held on the last day of August, the officers being: President, Charles Janvier; First Vice-Presidents, Gustave Lehmann, Sr., and Louis P. Rice; Treasurer, Wm. Adler; Secretary, H. M. Mayo. Dr. Beverley Warner was also made a member of the governing board. The aim and purposes of the association, as set forth in the preamble to the plan of organization, are "to assist in all measures affecting the health and sanitation of this city; to secure such laws or changes in our present laws, national, state, and city, as will place our sanitary legislation in line with the most recent discoveries in science; strengthen the hands of the health authorities; better enable them to keep out epidemic diseases; to deal efficiently and successfully with such diseases should they break through our lines of defense, and to minimize the panic and business injury resulting therefrom."

Sanmetto a Soothing Remedy to the Irritable or Inflamed Genito-Urinary Tract.

I am well pleased with Sanmetto. It seems to divest the urine of its morbid or irritating properties and has a soothing tendency in case of irritable or inflamed urethra.

JAS. B. WINN, M. D.
Wichita, Kans.

Sanmetto in Irritability of the Prostate and in Pre-Senility.

I have used Sanmetto in several cases during the past five years and have yet to be disappointed in results. Have found it particularly valuable in cases of irritability of prostrate gland with decreased sexual power.

JNO. T. HENDERSON, M. D.
Cleveland, Ohio.

Sanmetto in Enlarged Prostate and in Loss of Tonicity in Bladder and Sexual Organs.

My experience in using Sanmetto has been very satisfactory. The largest class of cases in which I have been prescribing Sanmetto is found among men who have passed middle life, with symptoms of enlarged prostate and some difficulty in urination where there is apparently a loss of tonicity of the bladder and the sexual organs.

M. BORTS, M. D.
Cleveland, Ohio.

Sanmetto in Enuresis.

I administered Sanmetto in a case of enuresis—male, six years of age—on whom other experiments had already been tried. The mother reports great satisfaction. The prescription for Sanmetto was only duplicated once and not all of the second quantity used. Thanks from the friends Sanmetto made and the doctor who prescribed the preparation as well.

E. ELLIS, M. D.
Chicago, Ills.

Sanmetto in Gonorrhea.

Sanmetto is a good remedy in urinary troubles. It seems to have a healing and soothing influence in such cases. I have used it internally in years past in gonorrhea as follows:

Tinc. Conii 30 gtts
Sanmetto 8 oz.

With an injection of Kennedy's dark pinus canadensis and listerine with soft water so as not to irritate the parts. It generally heals quickly. Sometimes I have used Sanmetto with balsam copaiba and spts. of nitre and mucilage of gum arabic. For injection use soft water and in a day or two inject a mild solution of acetate of zinc. In my hands Sanmetto has acted well.

W. W. BUDLONG, M. D.
Frankfort, N. Y.

THE INCORRIGIBLE; A DEMURRER.—The pharasaical editor of the Octopus practically pleads a demurrer. A wag of a lawyer here says: "In law, a demurrer is something like this: You bring suit against a neighbor to abate a nuisance you claim he has on his premises to your injury or detriment. You go in court and make the allegations. The other fellow says 'yes, you are right; all you say is true, but what are you going to do about it? You have no case, you can't help yourself.' That is a demurrer, and is often sustained by the court."

The Octopus has been arraigned for a nuisance, publishing the advertisements of secret remedies, denouncing the practice in others, yet shoving them under the nose of readers in every issue despite the calling down he had at Portland by resolutions introduced by "This here Jones" and others, resolutions calling on him to purge the paper of those ads, in which the formula is not given. He still publishes such ads. From the last issue, September 23rd, I clip this: "For insomnia, Veronal, average dose, seven and one-half grains. Send for literature to———." While "Thigenol Roche" is recommended for acne, eczema, erysipelas, urticaria, rheumatism, scabies, burns, metritis, cervicitis, pruritus, salpingitis, hemorrhoids, etc., and the 'formula' is given thus: "Sodium salt of the sulphonic acid of a synthetic sulpho oil." How delightfully lucid that is. As clear as mud. Why, of course, everybody knows what a sodium salt of the sulphonic acid of a synthetic sulpho oil is. Oh, Simmons, Simmons, what a wag you are. I clip from page 936 of the Journal, A. M. A., September 23rd, the following: After denouncing certain proprietary ads (which I have seen in the Journal), as nostrums, he says: "This brings up the problem we are trying to solve," viz.: "What is the difference between a 'secret proprietary medicine' advertised in medical journals to physicians, and a patent medicine advertised in newspapers to the public?"

Mr. Simmons has "solved the problem." He sees no difference; they are alike to him, and thus he is continuing to publish the advertisements of "secret remedies" all the same—because it pays—doubtless. If there is no difference, all should be excluded from the pages of the great "(mis)representative organ." But, as said before—"Yes, what you say is true, Mr. "Red Back," but what are you going to do about it?"—Texas Medical Journal.

Resinol in Pruritus

RESINOL is the specific for all forms of pruritus. There is nothing that produces such immediate cessation from its pain, burning, and intolerable itching.

RESINOL SOAP

possesses the healing qualities of the Ointment, and is invaluable for cleansing affected parts.

I find by testing it that your Resinol Ointment is a most excellent preparation for all skin diseases; and for pruritus ani et vulvæ, I have never found anything better.—I. B. HARGETT, M. D., Cleveland, O.

I used your Resinol Ointment a short time ago in a most intractable case of pruritus ani which defied every other remedy used. It was relieved in a very few applications. I regard your preparation as a triumph over this detestable symptom.—J. G. KELLY, M. D, Hornellsville, New York.

I tried your Resinol Ointment on myself. I had suffered from pruritus ani, or marginal eczema, for 25 years, and had tried many remedies without any relief, until Resinol proved soothing and stopped the itching instantly.—J. T. HICKMAN, M. D., Mt. Jackson, Virginia.

Resinol Ointment is the first local application I have found, that has given lasting and gratifying results in the treatment of pruritus vulvæ.—DR. GRACE WINTERSTEEN, Harrisburg Pennsylvania.

SAMPLES SENT ON APPLICATION.

RESINOL CHEMICAL COMPANY,
BALTIMORE, MD.

GREAT BRITAIN BRANCH
97 NEW OXFORD STREET, LONDON, W. C.

AUSTRALASIAN AGENTS,
CHAS. MARKELL & CO., SYDNEY, N. S. W.

Pneumonia Bronchitis

It is an important point in the treatment of pneumonia to reduce the dyspnea and irritating cough.

This may be done without internal medication and without disturbing the patient, by the use of Vaporized Cresolene.

Vaporized Cresolene has a marked sedative influence on all diseases of the respiratory organs attended with irritation and a spasmodic element.

Literature on application.

Vapo-Cresolene Co.
180 Fulton St., New York.
Leeming-Miles Bld'g Montreal, Can.

Formulas of the Medicines of the J. C. Ayer Company.

AYER'S SARSAPARILLA

EACH FLUID OUNCE REPRESENTS

Sarsaparilla Root	10 Grains
Yellow Dock Root	8 Grains
Licorice Root	8 Grains
Buckthorn Bark	4 Grains
Burdock Root	3 Grains
Senna Leaves	2 Grains
Black Cohosh Root	2 Grains
Stillingia Root	4 Grains
Poke Root	1 Grain
Cinchona Red Bark	2 Grains
Iodide of Potassium	4 Grains

Solvent: Alcohol, 10 and 1-2 minims to each fluid drachm; glycerine; syrup; water.

AYER'S MALARIA AND AGUE CURE

EACH FLUID OUNCE REPRESENTS

Quinia	8 Grains
Cinnamon	8 Grains
Jamaica Ginger	8 Grains
Cloves	4 Grains
Peppermint	8 Grains
Orange-peel	12 Grains

AYER'S CHERRY PECTORAL

EACH FLUID OUNCE REPRESENTS

Wild Cherry	6 Grains
Grindelia Robusta	4 Grains
White Pine	4 Grains
Seneaga	4 Grains
Terpin Hydrate	4 Grains
Blood Root	2 Grains
Rio Ipecac	2 Grains
Citric Acid	2 Grains
Heroin	1-6 Grains

Solvent: Alcohol, 10 minims to each fluid drachm; glycerine; syrup; water.

AYER'S PILLS

EACH PILL CONTAINS

Podophyllin	1-8 Grain
Jalapin	1-8 Grain
Aloin	1-12 Grain
Oil Peppermint	1-24 Grain
Oil Spearmint	1-24 Grain
Capsicum	1-24 Grain
Ginger	1-4 Grain

Persistent Headache due to Nasal Catarrh.

Nasal catarrh, both acute and chronic, frequently serves as the cause of headache. The pain is generally one of persistent type and classed as congestive. Examination in these cases may show suppuration of accessory sinuses with marked nasal obstruction due to small spurs, deviated septum and general hypertrophy. As a rule these obstructions are of little import if the engorged membrane can be readily depleted and the local circulatory system restored. This can readily be accomplished by instructing the patient in the use of a 25 per cent. solution (warm) by means of the K. & O. Nasal Douche. The solution should be applied at least twice daily until the nasal membrane is found to be perfectly normal. This measure will give prompt relief from the congestive pain and maintain the nasal membrane in a healthy condition.

The following case occurring in the practice of J. K. Cantrell, M. D., of Alton, Mo., can be cited as typical:

I suffered for twenty years from nasal catarrh and at times experienced the most agonizing neuralgic pain of a superior orbital character; like all other physicians, thought but little of using any remedy than my own until I received the sample bottle of Glyco-Thymoline sent me by you. It set in my office for mouths until one of those neuralgic attacks came on, and after using my own remedy with little or no satisfactory results, I commenced the use of Glyco-Thymoline and was relieved in eight hours of the neuralgic pain, and I am glad to say I am as free from nasal catarrh as an infant. The above disease is the only disease I have had a chance to use Glyco-Thymoline in, as I used the sample sent me in curing myself. In conclusion will heartily recommend Glyco-Thymoline to all who have nasal catarrh and will wager one hundred dollars that it will cure any case unless the disease is of syphilitic origin. I think Glyco-Thymoline should be introduced in every physician's practice in the United States.

Echinacea (Ecthol) in Syphilis.

Having noticed a great interest being taken lately in most all the Medical Journals, in this comparatively new remedy, I wish to say a word or two concerning the remedy, and to relate some of my experience with it in my practice. I have been using Echinacea for several years. I have been using Ecthol in syphilis for some time, and the results which I have obtained from its use, more than justify me in declaring that I believe all that has been said about the remedy, and furthermore I believe "the half has not been told," concerning its virtues. We are indebted to the Eclectic branch of the profession for this, as well as a great many other valuable remedies, it having been first introduced to the profession, I believe, by Prof. Jno. Uni Lloyd, of Cincinnati. Although it had been used sometime before, as a blood purifier and as a remedy for snake bites, (not in Kentucky though). It is primarily and distinctively a systemic blood purifier, or more appropriately an anti-puruleut, Anti-Suppurative. It has been used successfully and may be used in all cases where there is any tendency to Sepsis or blood poison, viz: Diphtheria, Puerpural Fever, Anthrax, Small-pox, Septicemia, all suppurative diseases and Syphilis. Thuja, one of the other ingredients of ecthol, comes to us from the Homeopathic branch of the profession, and is equally as effective. It has been used by them for years as an Anti-Sycotic and Anti-Syphilitic. It has also been used successfully for many suppurative diseases such as Small-pox, Purulent Otorrhea, the bad effects of impure vaccination and syphilitic Ozaena. The combination of these two hitherto little but wonderful remedies in ecthol suggested to my mind and led me to use it in syphilis. I would like to report a few cases treated with it from my note book, hoping it may be the means of inducing others to prescribe it. One of the first cases in which I used ecthol was the case of a young man, who was suffering with Syphilitic Ozaena. He was sent to me by a friend after having been under treatment from the beginning, by several good physicians. He had taken the Mercury and Potassie Iod treatment and had been pronounced well two or three times. Several months after quitting treatment, the present began to show and had steadily progressed under vigorous treatment until he came to me. I found him in a most distressing condition, the entire nasal cavity extending into the throat, mouth and tongue in a condition of putred ulceration; hearing almost lost from closure of the Eustacian tubes. The case looked almost hopeless, but I gave him as much encouragement as I could. I gave him ecthol internally in desert spoonful doses four times daily and had him use it freely as a local wash. I treated him at the office with atomizer every other day, using first hydrogen peroxide as a cleansing agent and then applying ecthol. Several times while using the atomizer there was expelled from the nostril masses of decaying matter containing bone, etc. This treatment was persistently carried out for over two weeks before much improvement was noticed. When it did begin it was steady and uninterrupted and I was gratified to see the case go on to a complete recovery in less than

Awarded
GOLD MEDAL
Louisiana
Purchase
Exposition

The Standard Antiseptic

LISTERINE

Awarded
GOLD MEDAL
Lousiana
Purchase
Exposition

A non-toxic antiseptic of known and definite power, prepared in a form convenient for immediate use, of ready dilution, sightly, pleasant, and sufficiently powerful for all purposes of asepsis; these are advantages which Listerine embodies.

* * *

Listerine
Dermatic Soap

An antiseptic detergent for use in the antiseptic treatment of diseases of the skin.

Listerine "Dermatic" Soap contains the essential antiseptic constituents of eucalyptus (1%), mentha, gaultheria and thyme (each 1-2%), which enter into the composition of the well-known antiseptic preparation Listerine, while the quality of excellence of the soap-stock employed as the vehicle for this medication, will be readily apparent when used upon the most delicate skin, and upon the scalp. Listerine "Dermatic" Soap contains no animal fats, and none but the very best vegetable oils; after its manufacture, and before it is "milled" and pressed into cakes a high percentage of an emollient oil is incorporated with the soap, and the smooth, elastic condition of the skin secured by using Listerine "Dermatic" Soap is largely due to the presence of this ingredient. Unusual care is exercised in the preparation of Listerine "Dermatic" Soap, and as the antiseptic constituents of Listerine are added to the soap after it has received its surplus of unsaponified emollient oil, they retain their peculiar antiseptic virtues and fragrance.

* * *

Awarded
Gold Medal
Louisiana
P urchase
Exposition

A sample of Listerine Dermatic Soap may be had upon application to the Manufacturers.

Lambert Pharmacal Company, St. Louis, U. S. A.

Awarded
Gold Medal
Louisiana
Purchase
Exposition

four months. The hearing was restored, and the young man is today, apparently, as well as he ever was. The local treatment was discontinued after about two and a half months, but he continued to take ecthol occasionally for fear it may return. Since then I have prescribed it in several cases of syphilis with unvarying success.

Another case was a negro woman with tertiary syphilis of the worst type. Her body was covered with sores; so much so, the case was at first thought to be small pox. This disease was epidemic in an adjoining country. I was health officer of the place and was ordered to this woman's house by the mayor to examine her, and report. I found the woman lying on the bed with all the appearance of a case of small pox. Her history, the duration of the disease, and everything else pointed to syphilis and I so reported. At her request, and by order of the mayor I took charge of the case. As this was a typical case and one that had had very little treatment, I thought it a good opportunity to give ecthol a good trial. I gave it to her in maximum doses, desert spoonful every three hours at first, gradually reducing the dose and lengthening the intervals as the case progressed. The surface was too extensive to use it locally so I had her sponge the body twice daily with a solution of Bichloride of Mercury about 1 to 2000. After about ten days of this treatment her improvement was noticeable and was decided in two weeks. It continued steadily and without interruption until she was entirely cured, which was in about three and a half months. She continues to take ecthol occasionally, and when last seen was the cleanest looking coon in town.

Another case of a young man with tertiary syphilis. He was a man of means and had had the best treatment with the very best attention; had been to Hot Springs twice. He, however, was dissipated and had taken very little care of himself. When he came to me he was suffering from a partial paralysis of his left side, an eruption covering most of his body. Two running sores, one in the right groin and one on his leg. His general condition was very bad. Hair most all gone and suffering greatly from melancholia. As he had gone through the Mercury and Potash treatment I gave him ecthol internally and locally and took care to impress on his mind firmly that I would cure him, if he would quit all his dissipation and do as I told him. I had no trouble in convincing him that this was his only hope and he followed my advice to the letter. His improvement was slow to begin, like the other cases, and I had much trouble at one time in holding him to the treatment. He staid with me, however, and after three or four weeks began to improve. Considering the desperate character of his case his improvement was wonderful. All of his symptoms disappeared, except the paralysis, and now it is so much improved can scarcely be noticed and I have hope of its being finally cured.

I have had success with ecthol in other cases, but these will show what a wonderful remedy we have in it for syphilis. I have used it successfully in other diseases. A most malignant case of anthrax on back of the neck, that had been given up by two good physicians was cured by it. Three of the cervical vertebrae were exposed when the slough came away. A sloughing ulcer on the left arm of a twelve year old girl, as large as the top of a blacking box, caused by impure vaccination was cured by ecthol internally and locally in ten days. It is a grand remedy in all of these cases and I can not say enough about it. I hope this will be the means of inducing others to give it a trial, and especially in those old chronic, incurable cases of syphilis.

H. M. MARSH, M. D.

Auburn, Ky.

Climate and Consumption.

Jan., 1883.—Mr.—, aged 45, married, has lived on his large cattle ranch in Colorado for the past 20 years. For the last two years has had constant distressing cough and has been failing in general health most of the time, the cough is very dry, temperature and pulses generally elevated but at times the temperature would be two degrees subnormal, the skin is very dry, thin, cold and muddy-looking, the loss of strength and emaciation very marked, appetite is very poor, bowels constipated and urine is very scanty, expansion 1 3-4 inches. Mr. ——— had been constantly under treatment and his physicians had advised his wife to have their business affairs arranged as he could not possibly live long. Within four months after taking Calicolo he was discharged cured. Expansion had increased to 3 inches, gained 30 pounds in weight, cough and expectoration entirely gone and there was no sign of any disease in the lungs, appetite is good, bowels regular, his skin is warm, pink and oily.

San Diego, Cal., Feb., 1902.—Mr. ——— called at our general office—twenty years after being treated—and says he has been well ever since his treatment, has constantly attended to his large cattle interests until this last year when he turned over the business to his son so he could travel.

N. B.—This patient was taken down in "climate" and cured in the same climate.

The use of local anesthetics in the past few years has materially increased, especially in major operations which heretofore were considered impossible without the use of a general anesthetic. The reasons for using them usually is that the patient may have some chronic valvular disease of the heart or of the lungs and also of the kidneys. All these tend to make the use of a general anesthetic more dangerous to life. Men are now doing amputations of the arm and leg, heriotomies, hemorrhoids and laparotomies under local anesthesia which no doubt in some cases would be impossible under a general anesthetic on account of some existing pathological condition existing elsewhere in the patient. In minor operations where the conditions are such that it seems a waste of time and unnecessary risk to give the patient a general anesthetic local anesthesia is used. The drug that has been most often used for this purpose is cocaine, the untoward effects of which have too often been seen by both dentists and physicians. Everyone who has had any experience with the above drug has seen the direct depressing action of cocaine on the heart, and some of us have seen patients die from the effects of this drug upon the heart. To guard against too much absorption of the drug from local injections we are warned to use some sort of constructing band about the part so as to interfere with this absorption. Again, after using cocaine the patient complains of having a great deal of after pain, although during the operation he was not conscious of it at the time.

In operations about the eye and other organs where great care and patience is essential the use of a local anesthetic is especially indicated, and also in those cases in which the patient is of a high strung nervous temperament, where a thorough examination of the throat would be impossible without their use In acute inflammations especially where pus is present and is confined and exerting pressure the parts are so sensitive that an examination may be even impossible, whereas with the use of the proper local anesthetic both the examination and operation are made without inconvenience or pain.

Local anesthetic may be used in various ways. The local application of ice or evaporating substances, which act in a similar way, may do very well in the most superficial conditions, but even then the patient often complains of pain, due, no doubt, to the anesthetic not acting well in the deeper nerve terminals of the skin or mucous membrane. By using the injection method the deeper nerves are reached and anesthetized completely. There-

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fore, although the physician and dentist can do the work well with cocaine he is ever conscious of the fact of, first, the danger to his patient's life, and second, of the almost unbearable after pain that is sure to follow its use.

Dr. R. B. Waite has on the market a compound which is so constructed, if used according to directions, will obviate all these difficulties which have in the past been considered essential drawbacks to the use of local anesthetics. Dr. R. B. Waite's Local Anesthetic is manufactured by the Antidolar M'f'g. Company, Springfield, Erie county, N. Y. Their advertisement appears in this journal.

Nervous Headache.

For headaches, superinduced by nervousness, Daniel's Conct. Tinct. Passsiflora Incarnata, when taken in teaspoonful doses, gives complete relief. Its sedative properties overcome the abnormal tension and permit rest. It has demonstrated its efficiency especially in weak women, whose nerves are overwrought and whose conditions approach the hysterical. Besides removing the pain and anguish, Passiflora strengthens the entire system, acts as a general tonic, as well as calmative, and thus promotes the continued health of the patient. It is most valuable in the treatment of all nerve disorders and the various diseases that result from them.

In Hepatic Disorders.

Raymond Wallace, M. D., editor Southern Medicine and Surgery, Chattanooga, Tenn., states that he frequently prescribes Sulpho-Lythin and that it is the best substitute for calomel he has ever found.

Poisoning with Bichloride of Mercury—Treatment with Adrenalin Chloride—Prompt Recovery.

By B. W. Taylor, M. D., Columbia, S. C.

Some time ago I was called to a case of mercuric chloride poisoning, following the use of a uterine douche, after labor, of a 1-2500 solution. The patient was nauseated, she was having profuse discharges of serum and blood from the rectum, the pulse was very rapid and the skin clammy. I did not think the woman would live until morning.

I ordered ten-minim doses of Solution Adrenalin Chloride to be administered hypodermatically, every two hours, as required; also strychnine, digitalin and stimulants. By morning the patient was markedly improved. All signs of poisoning had disappeared. The next day I observed the statement in a new medical work that Adrenalin Chloride is of value in bichloride of mercury poisoning.

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Notes on a Case of Perimetritis.

Hukam Chand, C. M. S., Surgeon Delhi Hospital, Delhi, India.

I was called to see a female patient in the city on October 12th, 1904. On arrival I found her with fever, temperature 102 degrees, tongue coated, pulse rapid, bowels costive, urine scanty and high colored, pain and tenderness over the hypogastric region as well as in both iliac fossae, vagina hot (as told by native dhai) but no discharge. On palpation the uterus was found hard and on inquiry it was found that the present complaint was due to abortion and exposure to cold. I diagnosed the case as perimetritis associated with ovaritis and prescribed:

(1) Calomel gr. 1-4. One every three hours.

(2) Antikamnia & Heroin Tablets. One every four hours.

(3) Turpentine stupes over the seat of pain.

(4) Liquor Morphia, 15 minims at night, if no sleep.

Oct. 13th.—Pain less than before, had a good sleep for four hours. Continued the same treatment.

Oct. 14th.—Pain less than the previous day, had good sleep without morphia.

Oct. 15th.—Pain considerably less, patient could walk with the aid of stick. Good sleep. Continued same treatment but stopped turpentine stupes.

Oct. 16th.—Very slight pain remaining, patient weak, otherwise well. Stopped calomel, prescribed castor oil, oz. 1, and continued antikamnia & heroin tablets as before.

Oct. 17th.—No pain at all. Bowels moved twice. Prescribed tonic mixture. Patient getting well.

Remarks.—In my opinion the recovery of this case was due to the analgesic and antipyretic properties of antikamnia & heroin tablets. They are worth a trial in such conditions.—Practical Medicine, March, 1905, Delhi, India.

The subject of laxatives and purgatives is often discussed, yet in this age it may be considered one of the most common, if not the most common, therapeutic measure used in the practice of medicine. One of the most noted authorities on the subject of indigestion and constipation attributes the great prevalence of these conditions among the American people as due to the excessive use of ice water. This no doubt may be considered as an important causual factor in these conditions, but there are other conditions which play an important role in causing these conditions. The most important of which are improper mastication of food, lack of exercise and the ingestion of too highly concentrated food stuffs. All the purgatives used at the present time act by nature of their irritation on the alimentary canal, most of them producing free watery evacuations, which temporarily relieve the condition present and act quickly. These are more especially indicated in those conditions where the kidneys have been temporarily overwhelmed with large amounts of effete material, which must be immediately excreted or will jeopardize the life of the patient. In those conditions of chronic Bright's disease, where part of the kidney substance is destroyed and the organ no longer capable of carrying out its full function, it is necessary that one use these hydrogogue cathartics in order to lessen the burdens of diseased organs. In practice one sees serious conditions and all grades of indigestion and constipation down to the simple acute indigestion and simple caustiveness. Therefore, it is essential as in all other branches of medicine that each case is peculiar to itself and needs special treatment. A case of simple constipation is often treated by the patient himself. He generally resorts at first to small doses of hydrogogue cathartics, which answer the purpose for the time being, but he soon learns that there is an after constipating effect produced by these drugs, so he takes a dose of the drug regularly and finds that it is necessary to gradually increase it in order to get the desired effect. The reason for this, is that these drugs act more by direct irritation on the intestinal mucous membrane which soon tolerates more and more irritation until the patient is driven to use the most highly irritable drugs in large doses if cascara sagrada in some of its forms is used until the required dose is reached and then the patient gradually decreases it until he has again formed the normal habit. Cascara and its compounds in proper doses does not act as an irritant in the way other laxatives and cathartics do, but gives tone to the muscular coat of the bowel, which is most often the most important condition to combat. A. H. Robins of Richmond, Va., has placed on the market a pill which is called Pill Cascara Compound in two forms, the mild and the strong. These are so constructed as to act as stomachic, tonic, antidyspeptic, aperient or cathartic as needed. They are always safe, thorough, certain and pleasant in right doses, and contain no mercury, strychnine nor belladonna, and therefore may be considered the 20th Century ideal laxative and universal alimentary stimulant.

Superiority of Liquid Medicines Over Alkaloids.

By Pitts Edwin Howes, M. D., Associate Editor "The Eclectic Review," New York; Secretary Massachusetts Eclectic Medical Society; Secretary Boston District Eclectiic Medical Society, etc. Boston, Mass.

Curation of disease is a problem which is constantly confronting the practitioner of medicine. Among the multitudinous duties of mankind there are none that are so complex as those which fall to the lot of the physician.

The mechanism of man is a wonderful network of complicated organs; all striving toward a common goal—the health and strength of its various tissues. While anatomy is essential to the understanding of the structure, physiology is no less important in aiding us to comprehend the action of its component parts. Physiology, then, plays a large part in the practice of the successful medical man.

It teaches us that all nutrition is supplied to the body through the medium of the blood; that this nutriment is conveyed to the blood, and the parts needing renewal, by means of endosmosis and exosmosis; that it is necessary for this nourishing pabulum to be in a liquid state before these exchanges can take place.

Experimentation has demonstrated that liquids

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Preventive Medicine and its Relation to Municipal Government and Society.*

By Brittle C. Keister, A. M., M. D., Roanoke, Virginia.

A distinguished writer has well remarked: "Ignorance, disease and civilization march hand in hand as a monster trio, defying science, the laws of nature and moral government."

This being partially true, it becomes readily apparent that the physician's chief duty consists more in the prevention than in the cure of disease. To be able to successfully accomplish this great mission in behalf of mankind and our great country, we must not only continue our usual daily task as physicians and healers of the sick, the maimed and halt, but we must do more. We must assume the role of reformer, statesman and humanitarian.

We understand by preventive medicine, the ability to keep off disease, keeping the organs of the body in a normal condition by avoiding those things that have a tendency to derange the natural functions of these organs.

This definition may apply with equal force to the prevention of disease from a municipal standpoint. The shores of our sea-coast should be guarded with as much care and scrutiny in preventing and warding off foreign disease, and thus protecting our country from this common foe of our race, as we would guard our people in time of war from a foreign foe.

The science of the preservation of health or the prevention of disease, is based upon our knowledge of the causation of disease.

This basis includes not merely the consideration of morbific agents, the manner of their diffusion, and the way in which they invade the body and modify the living organism, but also a study of those modes of life that are prejudicial to the integrity of the body. If we have a precise knowledge of the way in which a disease originates, measures of prevention may be readily formulated. We now know how to destroy mosquitoes and prevent their bites, yet our sanitary measures against yellow fever for past ages were insufficient and we have been wasting our energies in an unsuccessful attempt to check its headway. With the knowledge that this disease is mosquito borne, preventive measures were focalized against this deadly insect, and soon Havana and many other afflicted cities, perhaps for the first time in their history, were free from this fell disease. The municipal government of Havana, with a medical man at its helm, accomplished greater things in the short space of two years, in that once benighted little city, than had been accomplished in the previous century. Is this not an example of what can be accomplished by a mixture of sanitary science and municipal government, and worthy the imitation of the great cities of the world?

The further we delve into the science of the causation and prevention of disease, the greater are our convictions of the intimate relation that should exist between medical science and municipal government.

When we scan the statistics, as reported in our official journals, of the ravages annually made upon our race by the various preventable infectious diseases of the country, our mind's eye is made to drop a tear of sadness and our heart to send up a wail of regret for our long silence on, and indifference to, this important subject.

In our consideration of preventive medicine, we wish to pay some attention to the more recent developments as to the nature of disease.

Before going to war, we should study well the character and traits of our enemy, giving due consideration to the various lines of procedure, the modes of invasion, the habits, characteristics and even the topography and climate of the country. Until this is done, we cannot expect as good results from our crusade against so formidable an enemy.

Disease may be considered as a departure or deviation from a state of health, and may be of a structural or functional nature, while health may be said to express the harmonious reaction of the living organism to its environment. It is a relative rather than an absolute condition, and implies the adaptability of the organism, in both structure and function, to its surroundings.

Man seems to show the greatest ability to adjust himself to diverse environments, even more than any other organized being. The torrid atmosphere of the tropics, the extreme cold of the arctic regions, the altitude of the highest mountains, the low level of the plains, are all compatible with perfect health.

We may for convenience say a disease has a remote or predisposing cause, and an exciting or immediate cause; the former lowering the vital resistance of the system and at the same time favoring the latter cause. They may act interchangeably, so that what at one time is a predisposing

*Read by title before the State Medical Society of Virginia.

cause may become a determining or immediate cause at another time. Trauma is usually classed as an exciting cause, while at the same time it may be a powerful predisposing cause to many serious infections. Depressing and bad hygienic surroundings may on the one hand favor the invasion of the tubercle bacillus, and on the other may excite or determine the renewed activity of an old and latent tuberculous focus in the lung. The exciting factor of one disease may predispose to the development of another disease, as is often seen by the tendency to septic infection in persons addicted to alcoholism;—the susceptibility to tuberculosis of persons suffering from diabetes or measles. Predisposing agents all act by diminishing resistance, or increasing susceptibility. The normal immunity against disease may be increased by strictly observing the well recognized rules of hygiene, and obeying the laws of sanitary science which I shall endeavor to present at the closing of this paper.

One of the great exciting causes of disease is parasites, of which we have two distinct classes, the animal and the vegetable, both of which are capable of producing diseases of the most loathsome and deadly character. Much, of course, depends upon the susceptibility and immunity of the subject attacked by these micro-organisms. The modes and methods by which we may become victims to these deadly enemies of the human race are too numerous to even attempt any but a mere passing mention of in this paper. The atmosphere that we breathe is, under certain conditions, heavily laden with these micro-organisms. This is one of the prime sources by which we become infected with tuberculosis, influenza, pneumonia, etc.

The street dust of cities may be heavily charged with excrementitious particles from man and the lower animals, and may be carried by the gusts of wind into the eyes and upper respiratory passages of persons thus exposed, and thereby set up a nidus for these loathsome and fatal diseases that are so prevalent at certain seasons of the year. "At least thirty species of these micro-organisms flourish in the oral cavity." Some of them are pathogenic, such as staphylococci, streptococci, pneumococci and often diphtheria bacilli. They are constantly being removed, however, by the saliva, and other secretions from the mucous membranes of the oral and nasal cavities.

When we consider the fact of the oral cavity containing such a large variety of micro-organisms, should we not, as conservators of the public health and benefactors of mankind, devise some means of preventing the *unsanitary habit* of *promiscuous kissing* that is so commonly practiced by our American women?

This is one of the prime mediums by which tuberculosis, influenza, pneumonia, diphtheria, cancer and syphilis may be contracted. Innocent children are often made the victims of deadly diseases through this obnoxious medium, by allowing nurses, and even strangers on the street, who by a little artificial flattery, are permitted to kiss them. Toy stores, where tin horns and other mouth instruments are sold after being handled and tried by the mouths of a dozen or more prospective buyers, is another source from which infectious diseases are spread. What has been said of the above sources of infection may be emphasized in reference to Dentists' offices, where a dozen or more instruments are promiscuously used in as many mouths, thus transplanting the germs from one patient's mouth to another. These are common occurrences even among our best class of dentists, and should require the most careful attention from a sanitary standpoint by the family physician of those that require dental work. It is usually supposed that a first-class dentist always sterilizes his instruments, as first-class surgeons do, after treating each case, but after some inquiry and observation I regret to say that these antiseptic precautions are sadly neglected by the majority of the Dental profession.

Infections of the most deadly character may be contracted from the berths, seats and toilets of our present system of railroad passenger cars and steamships, through ignorance and lack of sanitary management on the part of the companies. It is no uncommon occurrence for a person to occupy a berth or state-room which has just been vacated by a tubercular patient, who, per chance, has been sent to some distant climate or winter resort for recuperation, or it may be that he is returning to his home to die among his friends and kinsmen. The attendants are usually ignorant persons who know nothing about infectious diseases, and still less about their prevention. The heavy, bad smelling woolen blankets and the much used pillows and mattresses are simply hot-beds for the spread of microbes. A microscopic examination of the dust on the sill or latch-hole of a single window of one of our Pullman sleepers will reveal the fact that this is the home and common dwelling place of half a dozen or more varieties of deadly parasites.

Could not suitable laws be enacted to compel these large corporations to constantly keep in their employ sanitary inspectors whose duty should be to supervise the careful fumigation of each coach, berth and seat every twenty four hours? And when the inspector finds a person on board who has a dangerous infection he should be isolated to a special apartment on the train or steam-

er, where his comforts will be made greater and his social pleasures not curtailed in the least, while at the same time, giving proper and timely consideration to fellow travelers.

Printed rules and restrictions should be carefully posted in a conspicuous place in each berth and seat of every railroad passenger coach and steamship. This same rule should be enforced by all street car companies, and should apply with equal force to all public waiting rooms, hotels, boarding houses, barber shops, assembly halls, theatres, public schools, colleges and churches. The old custom of allowing corpses to be placed in churches for exhibition during public funerals is another common source of spreading infectious diseases and should be discouraged by our churches. Public funerals over persons who have died of infectious diseases is a common source of spreading disease in a community.

The common house fly is a well known carrier of disease, and has been known to produce epidemics of typhoid fever. It was through this medium that nearly five hundred of our soldier boys died of typhoid fever at Tampa, Florida, during the Spanish-American war. The fly is capable of carrying on his legs and wings a sufficient amount of fecal matter from a tyyhoid fever patient to infect an army of over one hundred thousand soldiers. At Tampa the dejections were carried over one mile from the camps and deposited in deep trenches, and afterwards covered with slacked lime. Only 24 hours after this rule had been inaugurated the flies, whose legs and wings had never before shown any unnatural appearance, were now whitened with lime, and became quite noticeable to the soldiers at the dinner table when his "*flyship*" was seen displaying his new dress on the various dishes and sharing the soup as the uninvited guest of "Uncle Sam" and the soldier boys, and at the same time depositing the deadly micro-organism that had been borne on the wings and legs of his "*flyship*" from the trenches over a mile away.

What has been said of the relation of the fly to typhoid fever may also apply to tuberculosis and other infectious diseases. It has been shown by a number of reputable experimenters that the fly can carry tubercle baccilli on its feet and wings, and that it feasts upon tuberculous sputum with the greatest avidity. It has also been shown that smears from the stomachs of flies that have fed upon tuberculous sputum contain virulent bacilli that were unaltered by passage through the intestinal tract of the fly. The fly can carry large quantities of sputum to considerable distances upon its feet, wings and body to food, fruit, etc. Our fruit stands, grocery stores, meat markets, cheap restaurants, and the homes of the poor in the low and dirty sections of our cities are the places to visit in order to be convinced of the prevalence of this widespread evil and disseminator of infectious diseases. In the Philippines the army medical officers found that cholera was continually spread by street venders and small shop-keepers, whose articles of food for sale were constantly exposed to contamination by flies. These are undisputable facts.

All contaminated articles and vessels which may contain the sputum or saliva of tubercular or syphilitic patients, such as spittoons and drinking cups, when exposed to the ever present pestiferous fly, prove to be sources from which these diseases can be contracted and spread. Could not municipal and State government lend a helping hand in stamping out this great nuisance?

I may also add, along this same line, that a very common medium of infection is the ordinary mode our churches adopt of administering the Holy Sacrament, by allowing as many as from twenty-five to several hundred persons drink, consecutively, from the same communion cup. Any one of the above mentioned deadly, infectious diseases may be unconsciously contracted in this way. This simple precaution, while very important from a scientific and sanitary point of view, may not be very well taken by some of our over zealous churches, more especially those that hold extreme views on the *sinless perfection of the soul*, regardless of the *sinful imperfection* of the flesh. "It is not that which goeth in, but that which cometh out of the mouth that defileth."

It was at one time believed and preached by certain philosophers, that man's body was "*immortal*" on account of the micro-organisms with which it was *alive* after death. We might add that we have many instances of this kind of immortality among the *living* today.

If a disease be continuously present in a locality it is said to be *endemic*. Until 1901 yellow fever was endemic in Havana. But thanks be to sanitary science, our lamented Dr. Walter Reed, who discovered the cause, and municipal government, administered by Governor-General Doctor Wood, yellow fever has at last received its death blow, and Havana and other cities are reclaimed from this deadly foe. If these conditions, a mixture of municipal management and sanitary science, could be instituted in the city of New Orleans yellow fever would soon be a dream of the past. May we not hope for these happy results in the near future when the proud old metropolis of the south will shake off the foul stain of Yellow Jack and reclaim her former prestige as an up-to-date, wide-awake city?

A *pandemic* is an epidemic of certain diseases covering a vast area of country, per haps the whole globe, affecting millions of people at the same time. Our well known and ever present Franco-Russian La Grippe is a very conspicuous example of this class of diseases. This disease is no respector of persons or nationalities; its victims are found in every known hamlet on the globe. Its visit to America was made in 1889 90, as many of my hearers can testify. Its ravages are too well known to make even mention of them here. It has stalked abroad in our land like a monster demon slaying its victims, unmolested, in every cross-road village, town and city, leaving its blood marks in every grave-yard and cemetery throughout this country. Is this not a reproach to our boasted civilization, and somewhat of a reflection on our sanitary science? Can we not use our energies toward legislative prevention, and in the no distant future be able to call a halt on this hoary headed monster of the East? Bubonic plague is another pandemic disease which has recently made itself known to some of our sea coast towns, and is of foreign birth.

As previously intimated, these foreign diseases could have been prevented and our country protected from their ravages, had proper preventive measures been instituted by our government. What has been said of la grippe as an infectious and dangerous world-famed disease, may also be said of pneumonia, typhoid fever and tuberculosis. These three diseases are today destroying more lives and costing this country more than all other diseases and the U. S. army combined.

According to a recent distinguished writer, one-third of all mankind die of tuberculosis, while two-thirds have this disease. Many, however, recover from the disease without knowing that they have had it, or die of some disease coincident to a small tubercular focus in the lungs, which is brought about by the lowered vitality caused by the tubercular process. The tubercular bacilli are inhaled as dust, and may lodge in different tracts in the system. If conditions are favorable to their growth, they multiply there, but the tubercular bacilli do not multiply outside of the system. As many as five varieties of bacilli have been found on the train of one lady's long skirt after a single shopping expedition on a damp afternoon in one of our modern cities. This is not an infrequent occurrence, and is worthy the careful consideration of our city sanitary inspectors. This should appeal to the common sense of our American women as well as that of our municipal governments.

The susceptibility to tuberculosis is much greater with some persons than with others, and is much greater at certain times with the vast majority of the human race—when for instance, resistance is decreased through la grippe, overwork, or rundown conditions of the nervous system. Susceptibility is much greater when the air, as in the larger cities, contains enormous numbers of other micro-organisms. Tuberculosis is absolutely preventable, and its preventability is simply putting into effect simple rules of conduct. It is a question solely of scrupulous cleanliness in regard to expectoration and disinfection of surroundings which have once housed the disease. It is not only preventable but curable. It is a question of how early the diagnosis is made. "If made at the very beginning," says a distinguished writer, "80 per cent. at least of the cases are curable." But as is so well known to every experienced physician, tuberculosis is *the most insidious of all diseases*. A specialist may declare no indicetion of it whatever, and in a few short weeks it may manifest itself. When there is any doubt in the diagnosis a second examination should be insisted upon. When a cough exists for more than six or eight weeks, in a large majority of the cases there is back of that cough a tuberculosis focus, and it should be carefully looked for without delay. When any one talks to you about chronic bronchitis and continued colds, make up your mind that there is good ground for suspicion that there is a tubercular process starting up in the lung. Then is the time to establish a diagnosis when it is easily curable, while on the other hand, in a few short weeks or months the case may become hopeless. People so dread to be told that they have tuberculosis and physicians are so fearful of alarming them, that many thousands die annually because of a lack of moral courage on the part of physicians to say frankly but kindly, "You have tuberculosis, and now is the time to take precautions and get well." According to the best statistics up to 1902, about one-third of all the deaths that occurred in our large hospitals were due to tuberculosis, while in some of the older cities and hospitals the proportion was much greater. Statistics show that of all autopsies made, nearly 70 per cent. had lesions of tuberculosis. The records of one hospital in Germany showed that 87 per cent. of all autopsies had lesions of tuberculosis. Are these facts not worthy of our most careful consideration? Should they not be made known to our government officials and law makers, both State and Federal?

The moist condition of the mucous membranes has been found to favor the multiplication of certain micro organisms. A large number of the pathogenic bacteria inhabit the intestinal tract, such as the coli

communis, streptococci, etc., while those that do not normally exist in the intestines, readily cause disease, such as typhoid fever, tuberculosis, etc., etc. This class of micro-organisms is often taken into the system through the medium of drinking water that has become infected by the careless or ignorant management of the excretions from patients suffering from such diseases. The water from wells that are in close proximity to dwellings, or that are near the out houses, hog pens, water closets, stables, etc., or water in which sewerage from towns or cities is conveyed, is one of the direct and most unpardonable sources by which thousands of victims of typhoid fever are made every year. It is a fact worthy of note that by close inspection of the water in large streams, rivers, bays and lakes into which the sewerage of towns and cities is permitted to flow, is highly contaminated with many kinds of micro-organisms, especially that of typhoid fever, and, as has been repeatedly shown, the fish and oysters of some of these bodies of water have given rise to epidemics of typhoid fever.

Municipal government could do wonders toward preventing this, if proper legislation were instituted.

Along these lines we might insist upon the enactment of such laws as will require each public school board to employ a sanitary inspector whose duty it shall be to carefully examine each pupil, both physically and mentally, every month, to ascertain whether his system is free from any infectious disease, and also whether his nervous system is in a normal condition, and whether the mental forces are being overstrained with too many studies, or too close application with insufficient exercise in the open air. Many cases of incipient tuberculosis, when there is an hereditary tendency, dates its origin back to the badly ventilated and unhygienic conditions of the public school room.

Among the many indirect causes of disease, I consider our laws of civilization and education contributory, to a very great extent. "Health is maintained without effort only when there is a proper regulation of food supply and an absence of an abnormal stimulation or sedation of function." Excesses in eating or drinking, or the abuses of narcotics, sexual erethism, over anxiety and straining of the brain forces to become famous or wealthy, without regard to a proper regulation of sleep and rest, are also among the contributory causes of disease. Not only do such causes lead to functional and structural abnormalities, but they also tend to increase susceptibility to various pathologic processes. Dissipation in the use of alcohol in its varied forms under the caption of social intercourse, club-house carousals, etc., according to scientific and experimental evidence, increases the susceptibility to infectious diseases. Of 2,192 persons suffering from pulmonary tuberculosis, studied by Lancereaux, over one-half were known to be frequenters of the club-house, and regular drinkers.

According to clinical observation, the use of alcohol predisposes to phthisis. It is also a known fact that pneumonia, tuberculosis, cancer and typhoid fever run a more severe course in alcoholics. Not only is there a condition of depraved tissue nutrition in those who use alcohol, but the power of assimilation of food is much reduced. Moreover, alcohol is directly toxic and may cause death in an overdose just as any other toxic agent. (Spirituous beverages may contain, besides ethylic alcohol, many other toxic substances such as propylic, butylic, and amylic alcohol, acetone and various aldehydes, ethers and essential oils). Bitters, patent nostrums, cocktails and other so-called mixed and soft drinks may contain a number of these toxic substances. Absinthe, a French beverage, is said to contain nine toxic essences. Malt liquor is also subject to adulteration with poisonous substances. Thus we see that man's system is subject to the action of many toxic agents causing many obscure ailments that often puzzle the physician, not only in making his diagnosis, but in prescribing suitable remedies toward effecting a cure. A substance known as "*Cocculus indicus*" has been extensively used to fortify beer and give it a certain flavor and effect.

A wide-spread epidemic of arsenic poisoning occurred in Birmingham during 1900-01, which was traced to beer containing glucose, manufactured with sulphuric acid and contaminated by this metal. Lead poisoning has also been ascribed to the use of beer contaminated by vessels and lead pipes in its manufacture.

Overindulgence in malt liquors is particularly apt to be followed by parenchymatous and fatty degenerations in the viscera and also a necrotic condition of the blood vessels of the brain, while distilled liquors most frequently cause gastro-intestinal disorders, forms of sclerosis affecting especially the liver, kidneys, and central nervous system; neuritis and palsies, obscure neuroses, epilepsy, mania and dementia. Alcohol seems to increase the tendency to rheumatism and gout. There is a noteworthy relationship between alcoholism, the psychoses, insanity, venery and crime. Alcohol increases sexual desires, obtunds the moral sense, and favors a careless disregard of precaution against infection. Dr. Forel found that veneral infection was far more frequent among alcoholics than any other class. In over three-fourths of the cases

studied, the patients were under the influence of alcohol when infection occurred. Dr. Dana places the average duration of life of the alcoholic drinker at fifteen years. As a rule the hard drinker becomes a wreck and either dies of alcoholic poisoning or takes his own life at about the age of forty. When we consider that 180,000 deaths (Taylor) occur annually in the United States from the effects of alcohol, is it not high time for us to call upon municipal, State and Federal Government to aid us in the warfare of preventive medicine? In the prevention of dissipation especial stress should be placed upon the moral education and self control of the youth of our land. This is all the more necessary in the case of those inheriting morbid tendencies to depraving indulgencies. Such persons should be made to realize that the expression of hereditary tendencies is by no means inevitable, and that self restraint may be cultivated.

These important facts should be taught in our schools and colleges with many other important things that would help to prevent physical and moral decrepitude and decay. Sexual hygiene should also find a place in the public school curriculum. As preventive medicine, when viewed in its broad, general sense, indicates not only the prevention of disease and its consequences to the individual, but of still greater import to the mass of people.

Venereal diseases today are causing more domestic unhappiness and demands more attention from the family physician and the gynecological surgeon than any other class of diseases. Dr. Osler, in a recent article on preventive medicine, in describing the various infectious diseases which are the greatest scourge to the human race, such as cholera, yellow fever, small-pox, pneumonia, tuberculosis, leprosy, etc., says of venereal diseases: "These are in one respect the worst of all diseases we have to mention, for they are the only ones transmitted in full virulence to innocent children to fill their lives with suffering, and which involve equally innocent wives in the misery and shame." The social danger from this source is plainly shown by the frequency and gravity of marital infections. Fournier's statistics, embracing women from every walk and station in life, show that no fewer than twenty per cent., or one in every five, of all women having syphilis, were infected by their husbands soon after marriage. The frequency of gonorrheal affections in married life can not be computed, but we can form some idea of its gravity from the number of women whom it makes subjects for the operating table. Dr. Grandin, of New York City, has recently stated that gonococcic infection is responsible for 60 per cent. of all gynecologic operations performed by surgeons. Another distinguished gynecological surgeon remarked to Dr. Marrow, of New York, that he had just completed his four hundredth hysterectomy, and that fully 75 per cent. of his cases were operated upon for suppurative pelvic inflammation as the result of *gonorrheal infection*.

As Professor Marrow in *American Medicine* has well remarked; "Physicians are habituated to these horrors, and accept them as the deplorable, but inevitable, experiences incident to their professional work. The public never hears of them. It is evident that these diseases will continue their ravages, poisoning legitimate marital unions, and wrecking the health and lives of innocent women and children unless municipal government takes a hand in the prevention of their spread."

The Medical profession should become aroused to a full sense of its duty in effecting organizations of a sanitary and moral character for the prevention of this class of loathsome and degrading diseases. Public sentiment should be aroused by securing good, substantial citizenship to work in conjunction with the profession along certain specified lines that may eventually influence our national government to join with us in this great fight.

In this class of diseases the cause is within the control of the individual. Prevention is therefore a question of personal hygiene, individual prophylaxis and moral restraint. This important principle should be taught by the family physician at an early age of the young man and indelibly impressed upon him.

It is surprising that there exists among many members of the medical profession, who are fully alive to the significance of this peril, a feeling of pronounced pessimism as to the utility of preventive measures—they express a feeling of indifference and say: "These diseases have always existed and will continue to exist, it is vain to attempt to exterminate them."

It should be remembered that only a few years ago the same spirit of skepticism was manifested in regard to the prevention of tuberculosis. It was thought impossible to control a disease, the contagion of which was propagated by the ordinary relations of family and social life; and its obligatory feature of notification was opposed by the medical profession. Notwithstanding these discouragements an aggressive campaign was instituted, the people were enlightened as to its dangers to the public health, and the special medium by which the microorganisms of this fell disease were spread. Sanitoriums with modern facilities for treatment were provided, with the result that

already its spread has been almost entirely arrested, and its mortality reduced at least ten per cent.

All honor to sanitary science for this effort toward ousting from his long abiding place, the "Great White Plague!"

It is precisely along these lines that the prophylaxis of venereal diseases should be undertaken. It should be a campaign of education and a crusade against ignorance. The key to the proper solution of this great problem is not to encourage prostitution by license as is done by many municipalities but on the other hand to prevent the making of prostitutes. This requires a most careful study of the underlying causes—the bad social conditions of which prostitution is largely the product, the auxiliary agencies, the cadet system, the white-slave trade, the Rain's law of hotels, the purveyors of prostitution under whatever guise they may do their dark and damnable work. The making of prostitutes can be prevented by throwing additional safeguards around female minors, especially unprotected girls who go to the cities for employment, by establishing reformatories and homes for the reclamation of any who wish to reform. Every woman reclaimed from this kind of life, in addition to her social salvation, represents the suppression of a source of numberless contaminations of others.

It is no less important to safeguard the male minors. The evils of prostitution can never be corrected so long as the morals of young men are considered a negligible quantity and the "sowing of wild oats" a pardonable pastime.

It will be seen from the above facts that the prophylaxis of veneral diseases is preeminently a socio-sanitary problem complicated with all the complex interests of our social life which is a common factor in our civilization.

Any sanitary movement which is so complicated, the united efforts of all the best social forces for good morals and sanitary science, should be invoked. We should enlist the co-operation of the heads of schools and colleges who are entrusted with the education of the young, and who can institute needed reforms in the present system of instruction; of the clergy who can render invaluable aid in the moral training of young men and young women; of jurists who can intelligently frame legal measures of protection; of sociologists who can render material service in remedying social conditions which favor the spread of these diseases; of philanthrophists and public spirited men generally.

This important subject is now engaging the thoughtful attention of high dignitaries of both church and state of nearly all the nations. They are viewing, with lively interest, the dangers which come from the rupture of the marriage relation, the creation of a family, the raising of children with all the horrible effects of venereal disease upon conception and its blighting effect upon the product of conception. Syphilis so vitiates the creative principle that the children who escape with their lives are dwarfed, degenerate, stamped with physical and mental inferiority, and capable of transmitting the same class of organic defects to the third generation.

In the future evolution of hygiene or sanitary science, its function will not be restricted to the care of the present population, but will embrace in its objects the health of the descendants of this population.

The final service of preventive medicine to humanity will be the prevention of hereditary spread of disease by the sanitation of marriage. It is only by enlightening and hygienically advising the people, and by excluding from marriage those who have diseases that unfit men and women for marriage and parentage that we can prevent the mass of disease and misery that are thus engendered in the descendants. If these means prove inefficient, an enlightened public sentiment will doubtless sustain and sanction *coercive* legislation by imposing a penal responsibility for this crime.

Municipal government could not do a more humane act than to lend her aid to the humanitarians of our profession who may feel disposed to put forth an organized effort for the purification and sanitation of our marriage laws. Our State and Federal governments could not contribute to a more worthy object for suffering humanity and the upbuilding of our country and nation than joining hands with the medical profession of this country in stamping out and preventing infectious diseases. Such, for instance, as tuberculosis that is destroying millions of our young men and women annually; pneumonia, the rival of tuberculosis, of late years, plucking its thousands of our robust, sturdy manhood every winter and spring. In 1900, as many as 105,971 people died in the United States of this disease. In New York city alone 12,366 died of pneumonia last year (1904).

Close in the wake of the above two deadly enemies of the race, comes that terror of the human family, cancer, destroying, according to the latest statistics, 64,000 people annually in the United States. Of all the diseases that have puzzled science since the world began, none have been so deadly, so insidious as tuberculosis, pneumonia and cancer. Crafty beyond the measure of man, they have slyly crept upon every civilized nation on the globe, and once a hold is gained, they never cease to grow. All other diseases, it is realized, are in their in-

fancy as compared with these. Grim and terrifying pneumonia heads the list at the present day, it having passed its rival and old leader tuberculosis during the past few years. This is due to the stunning blows that tuberculosis has received on his *solar plexus* by the mighty hand of sanitary science, and the unaccountable increase in mortality of pneumonia over previous decades. Typhoid fever following close on to the above diseases, slaying its thousands of every age from early youth to middle manhood every summer and fall. Then we have small-pox, yellow fever, cholera, bubonic plague, leprosy, syphilis and many others that demand the most careful and scientific management to prevent their deadly scourges upon our race.

It is said that, of the 2500 soldier boys, who lost their lives during the Spanish-American war, 86 per cent. died from infectious diseases. Are not all these sad facts sufficient argument in themselves to convince any sane mind that there is an aching void somewhere? *That there is a vacancy in the cabinet at Washington that should be filled by a competent representative of the medical profession whose timely advice on scientific medicine and sanitary science can be utilized for the common weal and eternal welfare of our beloved country and nation?*

It is a sad reflection on our modern civilization that while we regard so essential the separate departments of War, of State and of Agriculture in the Cabinet at Washington, we deliberately ignore the safeguarding of our people from the terrors and sufferings of infectious diseases.

In my humble judgment, for a practical and scientific solution of this great problem that confronts the nation so boldly today, there should not only be a competent representative of the medical profession at Washington, but each state in the Union should have a representative as Sanitary Commissioner, whose duty should be to supervise the management and prevention of all contagious or infectious diseases of this country along the same line of action as our State Commissioner of Agriculture.

One of the important duties of a State Sanitary Commissioner should be the selection of competent sanitary inspectors for each county and municipality of the state, ranging in number according to population, say one inspector for every 5,000 inhabitants. Each inspector should be required to visit and inspect all the schools, both public and private, that may be within his jurisdiction and make a detailed report each month, and all such reports published in a quarterly bulletin or sanitary journal with other important sanitary information. A copy of this bulletin should be sent to each county newspaper with the request to publish same at the expense of the county or municipality and a copy of the paper mailed to each voter in the county. These county and municipal sanitary inspectors should organize into a State Sanitary Association and be required to hold a convention at some important section of the state at least once each year, for the purpose of discussing important topics on Hygiene and Sanitary Science.

In conclusion I would recommend to this society immediate action on this important subject by the appointment of a committee to take the matter up with the Legislative Committee of the American Medical Association and urge prompt action before the next session of the U. S. Congress. This committee could also act in the same capacity in advocating these measures in behalf of the State of Virginia before the next meeting of our State Legislature. Let Virginia Doctors have the honor of starting this great movement in behalf of suffering humanity and our great nation.

P. S. For valuable information contained in this paper, my thanks are due Prof. P. A. Marrow of Bellevue Medical College, New York, and Prof. W. W. Babcock of Medico-Chirurgical College, Philadelphia.

The Combined Method in the Arrest and Cure of Tuberculosis.

By H. B Weaver, M. D., Asheville, N. C.

The distinguishing feature in the treatment of tuberculosis, in this the beginning of the twentieth century, is the lessening of therapeutic agents by physiological methods of therapy. This process is accomplished through the functions of nutrition, which have the power of; (1) Distributing to their ultimate destinations nutritive material derived from the blood through the process of digestion and respiration. (2) The power of stimulating the functional activity of the cells; thereby giving them a greater capacity for absorption of pabulum and a greater power to antagonize and resist pathogenic germs.

"This treatment which is now regarded by many as the most approved, for general improvement as well as a cure, is called the Hygienic and Dietetic." By this treatment we seek to improve the nutrition of the cells, by restoring as it were, the nitrogenous equilibrium, thereby increasing the resistance of the body; in other words to produce a condition which approaches as near as possible the normal.

This end can only be attained under two conditions; (1) The absorption and assimilation of a sufficient amount of albumenoid substances which are appropriated by the leucocytes and converted into nuclein, which is the substance by which the

primal cells are increased and revitalized. (2) By absorption and assimilation of oxygen through the process of respiration. In addition to the hygienic-dietetic treatment it would seem all important to employ other means, which would favor the generation within the organism of a substance protective in its nature, the action of which would be unfavorable to the life and growth of the bacillus and would neutralize its toxins and lead to a permanent cure. In other words introduce into the body directly a biological proteid, the essence of the bacillus itself, which shall so stimulate the organism that it will, in turn, manufacture an antitoxin which will be antidotal to the bacillus and its toxins, the result of which is immunization or a complete cure. This mode of treatment is only complemental to the other, and is rightly called the combined method of treatment.

The question of the treatment of tuberculosis would then seem to revolve itself into two propositions: "How can the vitality of the bacillus *be attacked*, and how can we render its dwelling place—the soil—practically *uninhabitable?*"

These two problems must be solved conjointly, "To wage war against tubercle bacillus," says Juttner, "without rendering the soil sterile leaves the patient liable to re-infection." "And to give all our attention to the soil means to ignore the essence of the disease".

Hence, it stands to reason that our treatment must consist wholly in the scheme of re-organization and generous support of abnormal and devitalized tissues on the one hand, and on the other hand, the rendering of the cause of the disease inactive or destroying it entirely. These two forces are isodynamic and are each complemental to the other.

Now in regard to the subject of diet for tuberculous patients, albumen, no doubt, holds the first place in the process of nutrition, as it presents in a high degree the character of a nutritious material, as it in all probability supplies the nitrogenous ingredients of the tissues, which give them their vitality, provide for their daily nourishment, and renovation. Albumen then has a double function; it is a tissue builder, and a defender of the organism against its enemies—the pathogenic germs. The first process is found in the action of the blastema of the leucocytes upon the peptone deliver ed to the blood from the digestive tract, which converts it into nuclein that principle we call protoplasm of Huxley, which is the primal basis of all cell formation. The second function consists in the segmentation of the multicellular white blood corpuscles by which the process of leucocytosis is increased and the body rendered more resistant to the power of morbific organisms.

As regards the food we should remember, as we have said, it should contain a sufficient amount of the proteids which shall enable the cells to fulfill their vital functions. The amount of these substances is determined by the needs of the organism itself, and in order that they be not exposed to too rapid oxidation they should be covered and protected by isodynamic substances, such as fats and carbohydrates, which go to make up the complete complement of food. But in seeking the proper elements of nutrition from the different articles of food for tuberculous patients, we should be careful in our selection, "lest we choose those which produce a marked deposit of fat, which can not be utilized by the organism for the time being, and consequently accumulates in the internal secretions and in the cells themselves, thereby lowering their vitality and decreasing their capacity for work." Hence, we see how possibly easy it is to over-stimulate, as it were, by alcohol, for instance, thereby producing that fatty infiltration among the tissues which is so undesirable, in that it cripples the cells in the performance of their function.

Whereas, on the other hand, we should seek to stimulate the organism to a greater assimilation of albumen to meet the demands of the body in the increase of cell resistance against the encroachment of microorganisms. For we are taught that neither the carbohydrates nor the fats, alone or associated with each other, are sufficient for nutrition.

At the same time we should remember that the introduction of an excessive amount of albumenoids, especially if not well digested, will cause decomposition in the intestine, which being absorbed would cause auto-intoxication which is to be sedulously avoided.

Therefore, we should seek to maintain the physiological balance between the three principal elements of food which consists of albumen, carbohydrates and fats, in their relative proportions of albumen 130, carbohydrates 300, fats 100 units.

As oxygen is a germ destroyer *par excellence* as well as the agent by which metabolism through combustion is maintained, it appears at once that the function of respiration is of no less importance than that of digestion and assimulation of albumenoid substances in the treatment of tuberculosis.

Osler in one of his latest utterance affirms, "The arrest or cure of tuberculosis is a question entirely of nutrition, and of measures by which the general nutrition of the body may be encouraged, the first and most important is fresh air."

Trudeau, speaking on the same subject

says, "A very large percentage of early stage cases are curable, and that the most efficient means is the open air treatment in a good climate."

Juttner is very positive that, "One day in the pure and dry climate of North Carolina is more than equal to all the pneumatic cabinets and oxygen tanks to be found north of the 39th degree of latitude in the United States."

This coming as it does from such high authority, what does it all mean? Does it mean that we have only lately discovered some new principle, the primæ vitæ in the atmosphere, or does it signify that we have lately learned how to utilize and apply certain physiologic hygenic rules which were first ordained by the All-wise Creator himself? What then is *fresh air* or pure air? We know that atmospheric air is a mixture of oxygen and nitrogen the proportion by volume of 21 parts of oxygen and 79 parts of nitrogen. That the daily quantity of air used in respiration is 320 cubic feet, or 140 times the bulk of the entire body. That 320 cubic centimeters are consumed at each respiration, that the air loses about 5 per cent. of oxygen in respiration. That at each respiration only about 16 C. Centimeters of oxygen is removed from the air and absorbed by the blood, and in 24 hours 500 litres or about 7 times the bulk of the body, 1½ lbs. That the expired air contains about 4 per cent. of carbonic acid; 13 cubic centimeters of this gas being discharged at each respiration, or about 400 litres or a little less than 1¾ lbs. in a day.

Hence, we learn from these facts that a healthy normal air must contain about 20 per cent. of oxygen and when it is reduced to 17 per cent. it is unfit for continual breathing, and when it is reduced so low as 10 per cent. it is at once incapable of sustaining life. And when the air is confined in a given space, a room for instance, it becomes vitiated by the diminution of oxygen and the exhalation of carbonic acid; that the vitiation is dependent on ventilation and the number of persons confined in the given space. Stagnant air, like stagnant water, is the bane of the consumptive. If you produce full circulation of air so that the equation of gases 21 to 79 atoms is maintained, it matters not whether the patient be confined within four walls, in a tent, or under the blue canopy of heaven alone, he will fulfill the physiologic laws of respiration; if so be, that the apparatus—the lungs—are in physical condition sufficient to allow a proper exchange of the gases within the pulmonary tissues. The essential feature about the whole matter is not the amount of air breathed at each inspiration, but the amount of oxygen *absorbed* by the blood though the pulmonary vessels. But unfortunately the most of tuberculous patients are already suffering from a diminution in quantity and quality of red-blood-cells, the carriers of oxygen, at the very time they are most needed by the organism for absorption of more oxygen. Hence, it goes without saying that the therapeutic indication is here to administer such remedies as would increase the hemoglobin of the blood which would, thereby, be enabled to absorb and carry more oxygen to the tissues.

In this connection, I do not wish it to be understood that I oppose out-of-door life in treatment of tuberculosis, for I think much good can be accomplished by an intelligent application of this method in selected cases. But I do think that this valuable and successful method is sometimes so much abused that it has become a *fad*, as it were, in the routine treatment of tuberculosis, in all cases, regardless of the general condition of the patient, or the stage of the disease. As we have intimated, *pure* air does not necessarily mean cold air; and if an abundant supply of fresh air can be obtained in a well ventilated and comfortably heated apartment, why should it not be as well to allow the patient to remain in-doors during damp, cloudy, inclement days, and very rigorous weather, rather than subject him to these vicissitudes for which, from anemic and hectic conditions, he is so many times so illy prepared?

For my part I believe that it is the sunlight that does the most good, in the open air treatment. And we can get fresh air and sunshine without resorting to such radical methods as is the custom of some.

The question of exercise and rest is a momentous one in the open air method. We can not discuss in detail this phase of the subject. But there is one cardinal principle that will hold good in every case, that when the disease is so active that it produces fever the patient should be required to remain inactive, either in bed or sitting whenever the thermometer registers 100 degrees. Otherwise if he is well nourished and has good heart action he may be allowed to walk or ride for an hour or two. On the other hand if the patient's fever and strength will not permit him to exercise in the open air he must sit or lie, being first well protected artificially, in the open air, on the veranda, or on the house top all day long, when the weather is at all admissible, and when very inclement he must remain in-doors; the room must be *thoroughly ventilated* with all that the word means.

If, as we have intimated, this indirect mode of treatment which consists in raising the nutritive power of the cells, is kept up for a sufficient length of time we may hope to obtain a permanent improvement of the general condition. The arrestment of the

disease under these conditions would then seem to consist in the encapsulation of the tubercle, which has been accomplished by the re-enforced powers of the organism, which has been enabled to throw up and around the focus of infection a fibrous capsule, which for a time will effectually restrain the bacillus from further infection, and destruction of the tissues. But the bacillus "*still retains its poisonous properties*," and at some future time may become dangerous to the organism through diminution of cell resistance.

Therefore, we must seek such agents that are *specific* in their nature, under whose influence the cells of the body will secrete protective substances in sufficient amount to diminish or destroy the vitality of the bacillus or nutralize its toxins. For this purpose two processes have been more or less adopted:

(1) Chemical substances like creosote have been recommended because they were supposed to exercise a definite antiseptic action.

(2) Biologic bacterial products have been introduced into the human body whereby we may induce immunization which is said to be active or passive according to the substances used.

The inhalation of compressed air medicated with antiseptic agents, and the inhalation of ozone are attracting attention in the nature of semispecifics for the cure of tuberculosis, as is evidenced by the number of practitioners, the country over, who have invested in static machines for generating ozone for their patients.

Theoretically speaking the introduction of oxygen or ozone ought to be the ideal treatment of tuberculosis. It ought, as it were, to supply the necessary link in the chain of vital elements which are antagonistic to the bacillus and its development.

But clinical experience does not confirm this view of the case. As we have said, the absorption of oxygen is regulated by the oxygen capacity of the red blood-cells, which is in direct proportion to their number and quality. It is plain, therefore, that the *forced* introduction of oxygen or ozone into the lungs is ineffectual and useless, as at best the healthy normal lung can only absorb 5 per cent. of oxygen. Hence, it is apparent that the benefits of forced inhalation of oxygen and other medicaments are only illusory in character, and to a great extent are make-believes and catch-penny expediences resorted to too often, I fear, in the spirit of commercialism.

One great author* says, "Every static machine has its ozone generating attachment, and the enthusiastic owner never tires of extolling the virtues of the ozone. That the enthusiasm of these men has given rise to many extravagant claims in its behalf is quite natural to suppose. After considerable experience with ozone I am led to believe that there is little clinical evidence to recommend it."

In this connection it is proper to observe that the enforced inhalation of creosote or any other antiseptic agent can not have a local germicidal effect on the bacillus, for two reasons: First, In most cases the bacillus is *not* aspired through the bronchial tubes into the air cells where it might find lodgement. Secondly, If it were proven that the primary focus of infection is in the abveoli, a germicidal agent sufficiently strong to kill the bacillus would also more effectually destroy the tissues of the lung. This proposition has been proven by incontestable witnesses.

Aufrecht claims to have been the first to demonstrate the hemotogenous origin of tuberculosis, in the following words: "But concerning chronic pulmonary tuberculosis no one suspected even the possibility that the path of entry of the tubercle bacillus would be otherwise than through the air passages, i. e., by inhalation, till the appearance of my paper in Wochenschrift in 1901." But your humble writer speaking on the pathology of the disease, as far back as 1897, said that they (the bacilli) advance from the portals of entrance in the bronchial glands, through the lymph channels, "*into and through the blood stream, and rarely, if ever, along the mucous membranes from the mouth to the air cells of the lungs.*"

Bumgarten declares, "The inhalation theory of human tuberculosis stands on such a weak footing that not even in a single case of this disease has positive proof been furnished that it was really brought about by natural inhalation of the specific bacillus." May we quote once more, Pottinger says, "It would seem that the normal anatomical condition of the lungs would make the direct inhalation of the bacillus in the air cells or finer bronchi almost impossible. The many turns and curves in the passages, the moisture of the surfaces, the waving action of the cillia, the residual air, all militate against it, nor does microscopic examination of these organs show particles of dust, soot or other foreign material in the ultimate air passages and air cells."

Flick, Knoff, and Von Ruck entertain the same opinion in regard to the mode of infection.

In view of these expressed facts from such eminent authority we are forced to the conclusion that the lymphatics are the chief ports of entry for the bacillus. And if, as has been already demonstrated by Aufrecht, the primary focus of infection occurs in a

*Juttner writing on this subject.

twig of the pulmonary artery, we can see no therapeutic indications *whatever*, for the use of antiseptic sprays or inhalation of ozone for their *specific* effect on the tubercle bacillus in the lungs. But we can see wherein creosote, ichthyol, and other agents have a beneficial effect when administered internally and in reasonable doses, from the fact they fulfill the first indication of treatment; they assist in a more perfect nutrition through the process of digestion and assimilation.

As we have said, immunity in tuberculosis is induced by the introduction into a body, a proteid of the bacillus tuberculosis, which stimulates the organism to the production of a specific antagonist against bacteria and their products, which will enable the organism to protect itself. This is active immunity. Passive immunity is said to be brought about by the introduction of an anti-toxin made outside the human body, in the blood of a horse, for instance, and is given gratis to the patient.

"The ideal treatment," says one, "would consist in the introduction into the tuberculous organism of the amboceptor, which could adapt itself to the complement on the natural alexins, in order to exercise its destructive influence upon the bacillus and its secretions and thus to assist the cells."

"The latter would then be spared the overwork which would otherwise be thrown upon them, and they could confine themselves to their proper functions of assimilation of nutritive material in the renewal of destroyed tissues."

In passive immunization the anti-tuberculous serum like that of Fiche and of Maragliano which is generated in the body of an immunized animal, has at best only a temporary neutralizing effect on the toxins of the bacillus, and to be of permanent benefit would, as in the case of diphtheria, have to be introduced into the body *continuously* and used *indefinitely*.

As the poisons of the tubercle bacillus are of two-fold origin,—some of them being elauborated by the bacilli themselves while alive,—others are contained in the dead bodies of the germs; the serum in order to exercise a definite influence, must contain on the one hand an anti-toxin, and on the other the corresponding ambocepter, which together will not only neutralize the bacterial products, but will also through cell activity produce a soil in which the bacillus can not find a lodgement and growth.

Will the various serums have that effect? *Will they permanently immunize against a future re infection?*

Active immunity is certainly to be preferred to passive immunity, for in the former the greater amount of immunization is done by the organism itself, and the result is, more permanent protective substances are generated, and clinical observations prove that in a tuberculous man, where a focus is healed, he remains immune against the disease from that time on. In other words we want to vaccinate man against tuberculosis just as we would vaccinate against small-pox. The injection of the specific substances—the amboceptor—which unites with the alexins, in the plasma of the blood, not only exercises a destructive influence on the bacillus and its toxins, but also stimulates the cells to renewed activity whereby a protective membrane is thrown around the original tubercular focus, which will effectually restrain the bacillus from its deadly work, so long as this protective envelope remains intact. But here the disease is only *arrested*, and so long as the tubercle with its poisonous bacillus enclosed within remains encapsulated within the tissues, just so long is it a menace to the life of the individual.

Active immunity changes the essential nature of the soil upon which the tubercle bacilli grow to such a degree that the patient is not liable to re-infection, or in other words, is permanently cured. The culture products of tuberculin, or the watery extract of the tubercle bacilli, are agents by which we can accomplish these results.

"By the simultaneous use of the dietic-hygienic and the specific treatment a general as well as a special stimulus is given to the cells to form substances which tend to render the condition of life unfavorable for the bacillus by diminishing its toxicity and thus securing a permanent cure." These two forms of treatment are mutually complementary and the success obtained by the combined treatment is much greater than those resulting from the use of either method separately.

The conclusion from all these facts is that in order to wage a successful warfare against tuberculosis and prevent its spread, the method which is pointed out by nature consists in increasing as far as possible the organism. All our efforts, therefore, should be directed toward that goal, as only two per cent. of tuberculous patients are treated in Sanitoria that method can not bring the desired relief.

Osler says that ninety-eight per cent. are treated in their homes, therefore, the general practitioner is, after all, the man behind the gun in this warfare, and to him and through him we must look for ultimate success. Tuberculosis will only then be vanquished, when it shall become possible to strengthen the organism and to assist with specific powers which will render it immune against the disease. "In other words when it will be possible to vaccinate it."

Aseptic Surgical Technique.

By Stuart McGuire, M. D., and W. Lowndes Peple, M. D, of St. Luke's Hospital, Richmond Va

The principles of aseptic and antiseptic surgery are fixed. The methods adopted for the application of these principles to practice vary with the environments of the surgeon, the character of his work, and his conception of what is essential and what is not essential to success. Lack of space prohibits a description of the various ways by which different men endeavor to accomplish the same object, hence the following is simply an outline of the methods followed in St. Luke's Hospital, of Richmond, Va. No claim is made for originality, as almost every detail has been derived from outside sources, nor is it believed that perfection has yet been reached, as changes from time to time are still found advisable. All that can be said is that results are very satisfactory.

An earnest effort has been made to fulfill the requirements of Ochsner who states that to attain the best results a technique must be (1) *simple* so that defects may be readily detected, (2) *uniform* so that assistants may be drilled to do the same thing in the same way. and (3) *reasonable*, so that the end desired is always understood and nothing is done without a purpose. What Price calls "fuss, feathers and foolishness" has been discarded.

The subject will be divided for discussion into the preparation of the patient, the preparation of the operating room with its accessories, and the after care of the patient and the wound.

I. PREPARATION OF THE PATIENT.

If practical the patient is admitted to the hospital several days before the operation, and for the last forty-eight hours is confined to bed. This gives the surgeon an opportunity to study the case and allows the patient to become accustomed to the new surroundings. The heart and lungs are carefully examined to determine the safety of the anesthetic, and the urine analysed to ascertain the condition of the kidneys. The bowels are carefully regulated, and the patient is urged to drink abundantly of water. A daily tub bath is ordered, also an antiseptic douche if the case be a gynecological one. The regular use of the tooth brush and of an antiseptic mouth wash is directed. The diet is simple and nutritious and of a character to leave little residual matter in the intestines. If the bowels contain gas a tablet is prescribed composed of resorcin, rhubarb, bismuth, and sodium sulphate, known locally by the druggists as "C. R. Tablets." The night before the operation the part to be operated on is cleanly shaved and the patient given a warm tub bath. The site of incision is then disinfected by thoroughly scrubbing with hot water and green soap, bathing first with a 70% solution of alcohol, then with a 1-1000 solution of bichloride of mercury, and finally a moist bichloride compress is applied which is retained in place by a bandage or binder. In shaving a sharp clean razor is used and in scrubbing a mop of soft gauze employed. It has been found that a dull razor and a stiff brush cause pain and roughen or excoriate the skin so as to make it readily susceptible to infection.

After the foregoing is completed the patient is put in a clean gown and made comfortable in bed. If there is any evidence of exhaustion a cup of beef tea is given. Before going to sleep a purgative is administered. Castor oil is the one preferred, but if the patient objects to it two compound blue bills are substituted. They are known locally as "C. B. Pills" and consist of aloes, rhubarb, blue mass, and colocynth.

If the patient is restless or nervous fifteen grains of chloretone is given which not only induces sleep but seems to have some effect in lessening or preventing nausea after the anesthetic. Next morning as soon as the patient wakes a saline aperient is given, usually Apenta water, and this is shortly followed by a soap suds enema. No food is given by mouth for four hours before the operation and the bladder is emptied immediately before the administration of the anesthetic. When the hour for the operation arrives the nurse pins a blanket tightly around the patient's limbs from pubis to heels, securely fastening it so as to make a neat, compact roll. The gown is then pulled down over it. A wheel stretcher is brought to the bedside, a second blanket thrown over it and the patient placed on it and transported to the anesthetizing room. It is a bad practice to begin the anesthetic in the patient's bed room, for while it removes one of the disagreeable features of an operation, it is attended by a prolongation of anesthesia and consequent increased liability to shock and nausea. The anesthetizing room adjoins the operating room and is furnished with two small tables. One table is for the anesthetist and contains chloroform, ether, masks, towels, vaseline, gag, tongue forceps, pearls of amyl nitrite and two hypodermic syringes, one loaded with ¼ gr. of morphia, the other with 1-20 gr. of strychnia. The other table is for the materials to be used in the second sterilization of the site of the incision. On it are sterile mops for scrubbing, a fenestrated sheet, five sterile towels and four glass flasks, containing respectively tincture of green soap, 70% solution of alcohol, sterile water, and 1 1000 bichloride solution (the

last two warm). As soon as the patient reaches the anesthetizing room the anesthetic is commenced. After unconsciousness has ensued the operating table is brought in, placed alongside of the wheel stretcher and the transfer from the one to the other effected. Now all should move quickly and smoothly, for rapid, systematic work will reduce the time of anesthesia by many minutes, a matter of importance in most cases. The patient is fastened to the table by two cotton bandages, one just above the knees and the other just above the ankles. The arms are extended by the sides and fastened by broad bandages about the wrists, care being taken not to constrict them. Thin rubber pads are pushed under the elbows to prevent them from chafing against the table. All knots used in fastening the patient are half bows which can be readily loosened. The protecting dressings are removed from the site of operation. Light oil cloths are placed so as to protect the gown and blankets, and the field is again prepared as on the night before. A clean assistant scrubs it with green soap and sterile water, going wide and including all land marks which the surgeon may desire to locate. Undue wetting and chilling of the patient are carefully avoided. The soap is washed off, then completely removed by free use of 70% alcohol, after which it is washed with a 1-1000 bichloride and covered with a towel soaked in the same solution. Sterile towels are placed over the rubbers and a sterile fenestrated sheet over the whole. The patient is now rolled into the operating room. This second sterilization of the site is a step of extreme importance, for the itching induced by the early preparation often impels the patient, even though asleep, to seek relief by thrusting a hand beneath the bandages and thus contaminating the skin.

II. PREPARATION OF THE OPERATING ROOM AND ITS ACCESSORIES.

The operating room is the heart of every surgical hospital. On it are lavished more time and money, and to it are given more care and thought than to any other part of the institution. And rightly so, because on it and its proper management depend the life of the patient and the reputation of the surgeon. A graduate nurse is in control of the operating room and she is alone responsible for its management. There is no division of authority, for here as elsewhere success can only be achieved in its highest degree when there is one head. Assistants are subordinates, but loyally, faithfully and conscientiously do their part. They are not changed too frequently as good work is essential and efficiency only comes with experience. The operating staff are drilled until they know how to get clean and stay clean. They are made to feel the great responsibility entrusted to them. In them is inculcated the "Belief in the Aseptic Idea," which leads to the development of the "Surgical Conscience." A well trained assistant should feel instinctively a contaminating touch, or a break in technique, as the musician feels the rasp of a false note, or the teacher the jar of a double negative.

DESCRIPTION OF THE OPERATING ROOM.

The operating room has a tiled floor, tiled wainscoting and waterproof walls, which can be washed or wiped down. In addition to a bountiful supply of daylight coming from a sky-light above and a large window on one side, it has electric lights, and is so heated that its temperature can be maintained at 80 degrees F. It has large porcelain washstands, with hot and cold water, the flow controlled by foot pedals. These basins are used exclusively for washing the hands. There is a porcelain sink in one corner for emptying waste water, etc.

The furnishings of the operating room are rigidly simple. There are no shelves with bottles for solutions or jars for materials, to catch dust. There are no cases for instruments as they occupy space and their contents rust in the steam charged atmosphere. In short, there is nothing in the room that is not to be actually used in the operation, and nothing that would prevent the room from being quickly and thoroughly cleaned and disinfected.

The necessary equipment consists of: (1) an operating table, (2) a glass or metal topped instrument table, (3) a sponge table, (4) a stand for solution basins, (5) two light stands for hand basins, (6) water sterilizers for hot and cold water, (7) a glass irrigator with rubber tube and hard rubber or glass nozzle, (8) a small metal stool. In an adjoining room easy of access there are (9) an autoclave sterilizer, (10) an instrument boiler, and (11) a utensil sterilizer for boiling basin trays, etc. The last three are purposely located in a separate sterilizing room because an open flame cannot be used in the operating room during the administration of an anesthetic owing to the fact that the vapor of ether is inflammable, and that of chloroform is decomposed, liberating chlorine, which is extremely irritating to the lungs of both operator and patient. The various tables and stands enumerated are covered with white enamel paint, which protects the metal and can be re-applied whenever needed.

Preparation of the Operating Room for an Operation.

Sterilization of linen.—On the morning

of the operation the sterilizer is packed with all gowns, caps, sheets, table covers, towels, dressings and sponges that are to be used. These are placed so loosely that the steam can readily gain access to all parts of every article. In an autoclave thus packed thirty minutes of steam at 15 pounds pressure has been found by actual test to be sufficient to completely exterminate all organisms and their spores.

Sterilization of Basins, Pitchers, etc.—The agate and porcelain basins, instrument trays and pitchers are boiled in the utensil sterilizer for ten minutes before each operation. As disinfection by hot water is much the simplest and quickest method, in the absence of a regular utensil sterilizer, one should be improvised by putting an ordinary tin wash boiler on a gas stove.

Cleaning and Arrangement of the Room.—Every one or two weeks, the time depending on the character of the work done, the operating room is filled over night with formaldehyde gas. This is done to exterminate germs that may have collected in inaccessible places. The morning of the operation the walls and floor of the room are washed, and the tables and other furniture are wiped with a 1-1000 bichloride solution. Any dust in the air is precipitated by allowing an escape of steam from the water sterilizers. The nurse in charge arranges all furniture and sees that everything is in the proper place. She puts the basins and trays in the utensil sterilizer, the instruments in the instrument boiler, and opens the door of the autoclave. Having as far as possible done everything that could be done before sterilizing her hands she next proceeds to disinfect them and put on her sterile gown and rubber gloves. She now unpacks the autoclave, covers the instrument and sponge tables with sterile sheets, places the instrument trays, solution and hand basins in place, and sets out every article to be used in its assigned position. She is aided in this work by an assistant who fills the solution and hand basins, makes up the salt solution and performs every duty that would require the soiling of the others hands. The clean nurse quickly performs her task without once contaminating her hands. A technique broken by frequent rushes to the solution basin to resterilize hands is faulty and dangerous. The instruments, sutures and ligatures are now brought in and arranged ready for use, with as little handling as possible. Finally the patient is rolled in from the anesthetizing room and the operation begun.

Duties of Assistants.—The number of assistants varies with different operators, and with the same operator under different circumstances. The following is a convenient division of tne work :

The anesthetizer stands at the head of the table. A tank of oxygen fixed for inhalation is in easy reach. His duty consists solely in administering the anesthetic, which requires his undivided attention.

The first assistant stands to the left of the table opposite the surgeon. He sponges the wound, catches bleeding vessels, and assists the operator in any way possible. He should anticipate the needs of the surgeon and direct the work of the other assistants.

The instrument assistant stands behind and to the right of the surgeon, at the instrument table. He hands instruments, ligatures and sutures to the surgeon as needed, keeps instruments in place, and assists otherwise when requested.

The sponge nurse stands behind and to the left of the first assistant. She has charge of the sponges, diaphragms, dressings, and sterile towels. She hands sponges to the first assistant and supplies diaphragms wrung out of hot salt solution. Of these she keeps accurate account so that none may be accidentally left in the abdomen or wound. At the completion of the operation she recounts them to see that all are in hand.

Extra assistant, or "Dirty Nurse." The assistants who have been designated have all to work with sterile hands, and should they in any way contaminate them they must immediately clean them again. The extra assistant performs all such duties as would necessitate soiling the hands of the others; such as readjusting the patient on the table, emptying and refilling solution basins, opening or closing doors, attending to wants of the anesthetizer, and the innumerable little duties that promote harmonious working of all the staff.

Preparation of water.—An abunnadce of water is needed for preparing the site of the operation, making and replenishing solutions, and supplying fresh water for the hands of the operators. Water should first pass through a close filter to remove any organic or inorganic matter suspended in it. Boiling for ten minutes renders it sterile. Two tanks are kept in the operating room, one of cold and one of hot sterile water, so the extra nurse can make a solution of any desired temperature by mixing them at a moment's notice.

Preparation of solutions.—To disinfect the hands and skin of the patient, to irrigate infected wounds and cavities, and to warm and moisten gauze diaphragms that are to protect exposed viscera, many solutions are used.

Normal saline solution is prepared by dissolving three drachms of sodium chloride in one-half gallon of water. As this often has to be quickly done during the progress

of an operation it is necessary to have sterile salt in readiness. This can be done by sterilizing the salt in an open mouth bottle in the autoclave, or by having a concentrated solution (3 drachms to the ounce) that has been boiled for ten minutes.

Bichloride solution.—This is used in strengths varying from 1-1000, employed in sterilizing the hands and skin of the patient, all the way down to 1-10,000, used for irrigation of wounds and cavities. It can be quickly prepared by dissolving in a given quantity of sterile water the number of tablets of bichloride of mercury specified on the bottle by the manufacturer to make the desired strength. When used in large quantities it is cheaper to keep a concentrated solution; say thirty grains of bichloride of mercury, 2½ minims of hydrochloric acid, and a small quantity of methylene blue, to the ounce of water. One ounce of this solution to one-half gallon of water makes a 1-1000 solution.

Thiersch's solution is used especially for irrigating the bladder. It is prepared by dissolving one drachm of salicylic acid and six drachms of boracic acid in one-half gallon of water.

Carbolic Solution.—Carbolic acid is a most effective germicide and at one time was much used. Numerous accidents, however, have occurred by mistaking it for alcohol or water, and these have lessened its popularity. For irrigating wounds, and vaginal douches, a solution is prepared by adding one ounce of carbolic acid to one-half gallon of water. It is well to remember that alcohol is an effectual agent to neutralize it in case of burns.

Sterilization of the hands.—The hands of the operator and his assistants are the most frequent sources of wound infection, hence their proper sterilization is the most important feature of the technique. The arms are bared above the elbows, the skin free from abrasions, the finger nails closely trimmed, and rings removed if worn. The practice of washing a little for minor operations and more for graver ones should not be tolerated, for such lowering of the standard of cleanliness is sure to lead to slurring of other details of technique, which some day will end in humiliating disaster. The operating room with the highest standard uniformly maintained will show in the long run the fewest number of infected wounds.

In the choice of an antiseptic solution for the hands it is not only necessary to choose one that will quickly and thoroughly sterilize them, but it must also be capable of doing this over and over again many times a day without so damaging the skin that subsequent sterilization of them is made difficult or impossible. Hands that are cracked and fissured, with split and hang nails upon the fingers, are unsurgical, for they are too stiff for easy, dexterous movement, and too rough to be readily cleaned. There are many methods of sterilizing the hands, some simple and some complicated. The following will be found an effectual process.

1st. Wash the hands in warm water and green soap. When the nails are softened pare and clean them with a sharp, clean knife. Scrub vigorously with a nail brush, taking them systematically finger by finger, palm, sides and back, soaking them from time to time in warm suds. Rinse them in running water, and repeat the process until fifteen minutes are thus consumed.

2nd. Immerse in 70% alcohol, rubbing the arms with it until all trace of the soap is removed. This should consume two minutes.

3rd. Soak them for two minutes in 1-1000 bichloride solution.

4th. Wash them in warm sterile water to remove the bichloride.

Should a sterile hand at any time during an operation come in contact with any article that is not surgically clean it should immediately be immersed in the bichloride solution.

Rubber Gloves.—An effective method of securing sterile hands is to encase them in rubber gloves which have been disinfected by being boiled. The hands should be sterilized as described above before putting on the gloves, else an unseen hole or accidental tear may liberate infected sweat into the wound. The rubber glove has many advantages and but one disadvantage. With them we present hands as clean as though they had been boiled. Not only do they prevent infection of the wound, but they also prevent infection of the hands from dirty wounds, a matter of extreme importance when other cases are to follow. The one disadvantage is that it is difficult to do fine and delicate work with them, for they obtund the sense of touch and make difficult the handling of the slippery abdominal viscera. Practice will, however, rob them of many of their objections. All assistants should wear them in an operation, and the surgeon should also wear them whenever they would not materially interfere with the quality of the work or unduly prolong the operation.

As previously stated rubber gloves should be boiled for ten minutes before each operation. When the days work is over they should be washed, dried and carefully inspected for defects. Needle pricks and other small holes can be repaired by patching with a piece from an old glove and Goodrich's Cement No. 4.

Soap and Nail Brushes.—Green soap as purchased on the market is usually infected. Even if sterile it soon becomes contaminat-

ed if placed in an open bowl on the wash-stand where the surgeon and staff have access to it. Soap should, therefore, be sterilized by boiling and guarded against subsequent infection. There is a soap container for sale by Powers & Anderson, of Richmond, Va., that fulfills all requirements. In its absence a number of mugs should be partly filled with soap, sterilized in the autoclave, and a fresh one used for each operation, the soap being removed with a spoon by the different individuals requiring it. Nail brushes are essential for the proper mechanical cleaning of folds of the hands and the spaces around the nails. An inexpensive type should be bought so that each member of the staff may have a separate one for each operation. Nail brushes should be sterilized in the autoclave before using. Immersion in a bichloride solution so softens them that they soon become worthless. They should be placed on a sterilized towel convenient to the wash basins and after being used should be thrown in a receptacle provided for them. After the days work is over they should be washed, boiled and dried.

Instruments and their Sterilization.—Instruments should be simple in construction so that they can easily be taken apart and cleaned. They should be kept bright and free from rust. They should be washed, boiled and dried after each operation. Just such instruments as are necessary should be selected for any operation and no others. The table should not be crowded with instruments that will not be used, nor should the patient be subjected to delay while forgotten instruments are sterilized. All instruments, including knives and needles, should be sterilized by boiling for ten minutes. It is unnecessary to put bicarbonate of soda in the water, for if the water is boiled for five minutes before the instruments are put in the free oxygen of the water will be driven off and there will be no rusting.

Knives should be sharpened on an oil stone and leather strop before each operation, just as one sharpens a razor each day before shaving. The temper of the steel will not be materially affected by boiling, and this will be found far more satisfactory than the old method of immersing them in pure carbolic acid, which is at best a dangerous antiseptic.

Preparation and Sterilization of Ligatures and Sutures.—Ligatures and sutures naturally divide themselves into two classes: (1) absorbable, and (2) non-absorbable. The absorbable suture is the ideal suture, for it disappears when its mission is accomplished. It has, however, a great practical disadvantage. It is extremely difficult to sterilize, for it cannot be boiled in water. Non-absorbable sutures are readily sterilized by boiling in water, but do not disappear when the wound is healed. If on the surface they must be removed, and when buried they remain as foreign bodies to be encapsulated by the tissues.

Absorbable Ligatures and Sutures.—By the term absorbable suture we mean catgut, for while kangaroo tendon belongs to the same class it has no special advantage over catgut.

Methods of Preparing Catgut.—The problems to be met are three. 1st, to render it absolutely sterile without injury to its tensile strength; 2nd, to preserve it in this state until it is needed; 3rd, to harden it so that it will resist absorption for a definite time. This latter step is only necessary for certain special operations, and, as chromic acid or some chromate is usually the hardening agent such catgut is called chromicized catgut, while the other is termed plain catgut. Both plain and chromic catgut can be purchased in sealed glass tubes, numbered according to size, all ready for use, and unless it is prepared under favorable surroundings by competent persons it is better to depend on some reliable manufacturer, who has a business reputation at stake, than to attempt its sterilization. The following is the method employed at St. Luke's Hospital:

(1) Take German catgut of any desired size, cut into convenient lengths—say thirty inches—and make into little coils about as large as a silver quarter. These coils are then strung like beads on a thread so that the whole quantity can be conveniently handled by simply grasping the thread.

(2) The string of catgut coils is dried in a hot air sterilizer for one hour at a temperature of 180 degrees F., and then for a second hour at 220 degrees F., the change in temperature being gradually accomplished.

(3) The catgut is placed in liquid albolene, where it is allowed to remain until perfectly "clear," in the sense that the term is used in the preparation of histological specimens. This is accomplished in a few hours, though it is usual to allow the gut to remain in the oil over night.

(4) The vessel containing the oil is next placed upon a sand bath and the temperature raised during one hour to 320 degrees F., which temperature is maintained for a second hour.

(5) The thread is then seized with sterile forceps, the catgut is lifted out of the albolene and allowed to drip until the excess of oil is removed. It is then put in a jar containing a solution of iodine crystals, one part, and Columbian spirits (deodorized methyl alcohol) one hundred parts. The thread is then cut and withdrawn, leaving

the coils free. The catgut is permanently stored in this solution. It is ready for use in twenty-four hours and will keep indefinitely.

The profession is indebted to Dr. Willard Bartlett of St. Louis for this method. The heat to which the gut is subjected makes the sterility absolutely certain; the oil with which it is saturated makes it soft and pliable; the iodine with which it is permeated makes it antiseptic and prevents its becoming infected after being placed in tissue. The advantage of the method over the Iodine process introduced by M. Claudius is that no water is employed, hence the gut does not deteriorate and lose strength. The advantage over the Cumol method is freedom from danger incident to the employment of an inflammable fluid.

(2) *Non-absorbable Ligatures and Sutures* are silk, linen, silkworm gut, and horse hair. These can all be sterilized by boiling in water. Silk is one of the oldest suture materials, and from a mechanical standpoint it is the most dependable of the list. It is small, strong, pliant, inelastic and will not slip when properly tied. For fine, accurate work, such as intestinal anastomosis it is indispensable, and is still used even by the most ardent supporters of the absorbable suture. Since it remains permanently as a foreign body it should not be used in pus cases when it can be avoided, for, once infected, it remains as a "dead ligature," keeping up the suppuration until removed or extruded. Catgut, which will soon be absorbed, is far preferable in such cases.

Linen, or Flax, is similar to silk and is used for the same purposes. There is a preparation of linen much in favor at present known as Pagenstecher thread. It is impregnanted with celluloid, which destroys its capillarity so it will not act like a wick.

Sterilization of Silk and Linen Sutures.—It is easy to sterilize silk and linen sutures as they can be boiled. The difficulty is in keeping them sterile until they are used. The secret of success lies in avoiding any undue handling of them. There is no time during an operation for threading needles, for with wet needles and wet silk it is a tedious and difficult task. The assistant should anticipate the surgeons need and thread them beforehand.

Take an ordinary operating towel and fold it down the middle longitudinally. Thread the suture into the needle and tack it to the towel at three points, leaving the needle in the last. When four to six threads are thus pinned to the towel a quarter of an inch apart, skip an inch, proceed with the next size and so on till all are in. The towel now contains all the sutures that are to be used, with their needles in a row at the top and the sizes separated by broad spaces so they can neither become mixed nor tangled. The towel is now folded across and rolled up and pinned. This package is sterilized by boiling with the instruments. Since silk and linen are weakened by boiling any left after an operation should be discarded.

Silkworm Gut.—This is known to fishermen as grass and is seen as the long, transparent leader on fish hooks. It is the immature silk taken from the cocoon, drawn out into wire-like threads of different sizes and from 14 to 16 inches in length. They are small and pliant, with no capillarity and great tensile strength and make excellent external sutures. To sterilize them three strands are taken and made into a coil just as was done with the catgut. These coils are strung on a thread. The string of coils is then boiled in water for ten minutes. Finally the thread is seized with sterile forceps and the coils transferred to a jar containing a solution of 1% scale iodine, 40% water, and 60% alcohol, in which they are kept until used. The iodine stains the white translucent strands, thus rendering them more easily seen. In addition it makes the suture antiseptic. This is an important feature now recognized as desirable in all sutures. It is not sufficient for a suture to be simply aseptic, because in its passage through the skin it is liable to become infected with the staphylococcus pyogenes albus ever present in its deeper layers. In order to inhibit the growth of this germ and prevent suppuration and the development of a stitch abscess the sutures should exert a germicidal or antiseptic action.

Horse Hair makes a good skin suture where neat, accurate, plastic work is to be done, as in wounds on the face. Either hair from the tail or mane may be used. It is prepared by washing thoroughly with green soap and warm water to free it from dirt, then soaking in ether for twenty-four hours to remove the oil, then making it into coils, disinfecting it by boiling and storing and rendering it antiseptic by putting it into a solution of iodine, water and alcohol just as was done with the silk worm gut.

Drainage Materials and their Preparation.—Drainage is employed for two purposes; to remove infected material from wounds or cavities, or to remove such fluids as blood or serum which offer an inviting soil for bacteria and mechanically interfere with the proper healing of wounds. For these purposes rubber and glass tubing and strips of gauze are used.

Rubber tubing can be purchased from any surgical supply house in sizes ranging from that of a goose quill to as large as the thumb. It should be disinfected by boiling for ten minutes and kept in jars containing 1-1000 bichloride solution. If it is known

that it will be employed in a given operation it should be reboiled with the instruments. Fishing it out of the jar at the last moment causes delay and endangers infection from contact with unclean edges. Before placing the rubber drain in position small holes should be clipped in the sides by doubling it on itself and cutting away the corner with scissors. It is usually better to bring the drain out through a separate stab incision in the skin. This enables the surgeon to locate the outlet of the drain at the most dependent part, an important point, as the tube cannot drain up-hill, and also permits of the complete and immediate closure of the primary incision, a procedure which prevents complications and hastens the patient's recovery.

Glass Drainage Tubes are especially designed for draining the peritoneal cavity. They are from four to six inches in length and from one-fourth to one-half an inch in diameter. The upper end is flanged so it cannot slip into the abdomen, while the lower inch or two is perforated with holes. When occasion requires the tube is placed so that the lower end reaches the most dependent point in the pelvis and its upper end emerges through the abdominal incision. It is aspirated as often as the cul de sac fills by a glass syringe with a rubber tube on its tip. Glass drainage tubes should be disinfected by boiling.

Gauze Drainage performs a function which the others cannot do. It drains up hill. It does this by capillary attraction like a lamp wick. If dry gauze or cotton is packed around a lamp wick and replenished as often as it becomes wet it will empty the lamp of oil more quickly than a flame. This must be borne in mind in using gauze drainage. Keep dry gauze and cotton on the upper end of the drain. When the gauze gets choked with pus it stops draining and must be replaced with fresh strips. Gauze drains are made by taking strips of plain aseptic gauze, or of iodoform gauze, and laying them parallel with each other until a drain of the desired size is obtained. The strips may be cut by a nurse but can be bought ready made on the market with woven edges so that there are no ravellings or loose threads. The strips vary in width from one-half to three inches. The advantage claimed for the iodoform gauze over the plain is that the iodoform prevents the development of saprophytic organisms and the decomposition of wound secretion. Certainly it will be found that a wound drained with iodoform gauze has less offensive odor than a similar one drained with plain gauze. Gauze strips should be sterilized by packing lightly in a glass ignition tube, plugging the mouth with absorbent cotton, and subjecting to heat under pressure in the autoclave.

Rubber Tissue.—One of the objections to gauze drainage is that granulations grow into its meshes from adjacent tissue and render its removal at times difficult and exceedingly painful. This objection may be overcome by encasing the bundle of gauze strips with thin rubber tissue, wrapping it about it as a cigarette smoker wraps the paper about the tobacco. The ends of the gauze are allowed to extend an inch or more beyond the rubber tissue. This prevents adhesion of the gauze to the surface of the wound and does not interfere with its function as a drain. Rubber tissue can be bought from any dealer in surgical supplies. It does not withstand heat, hence cannot be boiled. It should be prepared for use by cutting in squares 4 by 6 inches, washing with soap and water, and then stored in 1-1000 bichloride solution. When needed for use it is taken out of the jar with sterile forceps and rinsed in plain water. Only a limited amount of rubber tissue should be prepared at a time as in a few weeks the solution causes it to lose its strength and become friable.

Sponges are used principally to remove blood from a wound. The name is a relic of the time when marine sponges were used. Now all surgeons employ gauze as not only cheaper but safer. Sponges are made by taking a piece of gauze one-fourth of a yard square, turning in the edges and folding it into a square about 4 by 4 inches. These are put up in loose packages and sterilized in the autoclave.

Diaphragms or Gauze Towels are used to wall off or protect parts of the abdomen, to dam back the intestines out of the pelvis, and to keep exposed viscera and raw surfaces warm. They consist of four thicknesses of gauze hemmed at the edges. They are about 18 inches square, and have a piece of tape sewed to one corner. When put into the abdomen this hangs out and is clamped with forceps as an additional precaution against leaving it in after closure.

Dressings should be cut in convenient sizes and shapes, ready for use, so there will be no delay in applying them. If gauze is cut into rectangles 7 by 8 inches, by folding four or five thicknesses across, pads 7 by 4 inches are made which are convenient for use. The frayed ends, when packed against drainage strips rapidly disseminate fluids through the entire dressing. A padding of these one-half inch thick is placed over the incision and fastened in position with adhesive strips. This is then covered with a pad of cotton and the whole secured with a binder or roller bandage.

Abdominal Pads are used in dressing abdominal wounds. They are made of cotton 1½ inches thick and 8 inches wide by 10

inches long. They are covered by a double thickness of gauze to prevent the cotton flying and to facilitate handling.

Perineal Pads are made the same way, only they are 8 inches long by 3 wide and 1 inch thick. With each is a T bandage to hold it in position.

Dusting Powders for clean wounds have been practically discarded. Those with iodine as a basis at times decompose, making an irritant. Others form a crust, which keeps in the secretions of the wound or prevents their removal by clogging the drainage. As good results are obtained without their use, and the powder box is simply one more source of possible contamination in the operating room.

III. THE AFTER CARE OF THE PATIENT.

When the operation is concluded, the dressings applied, and the gown, if soiled or wet, changed, the patient is ready to be taken to his room. To accomplish this would seem a simple procedure, yet from the lack of definite plan it is often the occasion of much confusion and delay. The litter consists of a light frame of metal tubing resting on a rolling carriage. The frame is short enough to fit lengthwise in the patient's bed. The litter is covered with a warm dry blanket. It is rolled up beside the operating table. Two assistants on the opposite side of the table now lift the patient vertically upward while two others slip the frame beneath him. The blanket worn around the limbs during the operation is now removed and the blanket on the litter wrapped about him. The frame is put back on the carriage and the patient quickly rolled to his room. The frame is put on the bed, the patient lifted up and the frame slipped out. The transfer is complete and there has been no pulling or hauling, which might slip a ligature or disarrange the dressings. Some one must now sit with the patient until the effects of the anesthetic have worn off and reaction has taken place.

Shock is rarely seen in an alarming degree after operations on properly prepared patients, planned and executed so as to avoid unnecessary loss of heat, blood and time. It is frequently seen, however, in accident cases especially if there has been hemorrhage or mutilation.

The operating room is not the place to treat shock. Only in rare cases should intravenous or subcutaneous transfusion be practiced while the patient is on the table. The unavoidable delay in the operation, the danger of infection and the manipulations of unskilled assistants which attend the procedure, render it more productive of harm than of good. All that should usually be done is to give a hyodermic of a small dose of morphia and bend every energy to the rapid completion of the operative work and the early removal of the case from the table. The patient should be put to bed between warm blankets. Additional heat should also be applied by means of hot water bags, due precautions being observed to prevent accidental burns. The foot of the bed should be elevated to gravitate blood to the anemic brain. The half empty blood vessels should be filled by the introduction into the system of as much normal saline solution as it will take up. This can best be effected by low pressure continuous rectal injection. By this method many quarts of fluid can be introduced without discomfort or traumatism.

While the use of small doses of morphia has a decided effect for good, the confidenee formerly placed in strychnine seems misplaced. If shock is due to paralysis of the vaso motor system then stimulation of the exhausted centres will result in more harm than good. Of all drugs employed to produce re-action the solution of chloride of adrenalin seems the most logical. As its effect is evanescent the doses must be repeated at frequent intervals. In addition to the measures recommended it is of the utmost importance to exclude all relatives from the room, thus removing injurious excitement. The patient should not be encouraged by hysterical reassurance, but made to feel that everything is being done for him by the quiet self confidence exhibited in the department of doctor and nurses.

Pain.—The first, and to the patient, the most important symptom after an operation to demand prompt and adequate treatment is pain. It is often a difficult question for the surgeon to decide how much the patient really suffers, and what measures are really demanded. Some patients make a great outcry when really they are more scared than hurt, and the pain will do them less harm than the drug which brings relief. Again, other patients invested with a sort of old fashioned doctrine of predestination will make no complaint, and it is only by seeing the set face, the compressed lips and clinched hands and noting the cold and clammy skin, that a knowledge is derived of the necessity for giving an opiate. When pain is moderate the patient should be encouraged to bear it, but when it is excessive the patient should be relieved by the hypodermic use of morphia. The bromides and coal tar preparations are worse than useless. Morphine in small, and if necessary repeated doses, is what is demanded. It is true the drug may mask symptoms, cause nausea and produce constipation, but it is the lesser horn of the dilemma. In the old days morphia was first abused, and then not used. Even now some well known authorities de-

cry its employment. The majority of modern surgeons, however, believe that when administered judiciously it not only brings temporary relief, but frequently saves life.

Nausea.—Another frequent and distressing symptom from which the patient suffers after an operation is nausea and vomiting, primarily due to the anesthetic, but sometimes continued by sepsis and the presence of blood and bile in the stomach. When the patient retches on the operating table, and it is evident there is fluid in the stomach, then much after distress will be avoided if the stomach is washed out before he is taken to his room. This procedure is a routine practice with some surgeons, but is not necessary or advisable in all cases. When nausea and vomiting continue it is at first treated tentatively by putting ice cloths to the forehead and throat, applying a mustard plaster to the pit of the stomach, and giving cracked ice or a few sips of water. If the symptoms are unrelieved the patient is given two glasses of tepid water. It is always taken with relish. If retained it reestablishes peristalsis in the proper direction, and if rejected it washes out the stomach almost as effectually as could be done by lavage. Drugs, such as creosote, oxalate of cerium, ingluvin, bismuth, hydrocyanic aid, etc., have been found useless, and effervescent drinks such as ginger ale and champagne are positively injurious. In the vast majority of cases the nausea will cease spontaneously as soon as the chloroform or ether is eliminated from the blood. Time is the only panacea and unless symptoms of sepsis are evident the less that is done by the surgeon the sooner the patient will experience relief.

In a few cases the vomiting, instead of getting better, gets worse. At first the patient strains violently and ejects a clear or yellow fluid. Later without muscular effort there is the constant regurgitation of a green or black fluid. There is little or no nausea, but at frequent intervals the patient gives a little gulp and spits out a mouthful of what is popularly supposed to be bile. A chemical examination will show that it is not bile but blood. The pathology of this condition is a disputed question, but it is generally believed that a low grade of septicemia has so weakened the gastric blood vessels as to permit of hemorrhagic transudation. The practical fact is that if these patients are let alone most of them will die. The introduction of a stomach tube will show the presence of a quart or more of black fluid in the stomach. What is spit up is merely the overflow. If the material remains in the stomach the patient will die from exhaustion. If the material passes into the intestines the patient will die from toxemia. The prompt use of the stomach tube at the first symptom of black vomit, the emptying of the viscus and the irrigation of its cavity with normal saline or a weak adrenalin solution gives the only chance for life.

Position in Bed.—In the early days of abdominal surgery patients were kept on their backs and not allowed to turn on the side for the first seven days. It was found, however, that in addition to the suffering entailed there was an increase in the liability to adhesions. After an ovariotomy or hysterectomy it is well to keep the patient in one position for the first twenty-four hours to lessen the danger of a ligature slipping, but in operations like appendicitis the patient should be encouraged to lie first on one side and then on the other. In cases of operations on the stomach or where there is a vaginal drain, the patient should be put in an exaggerated Fowlers position in order to carry fluids in the desired direction by gravity. Some surgeons go so far as to put all laparotomies in a sitting position from the first, claiming not only better drainage, but increased freedom of respiration from the removal of the pressure of the liver on the diaphragm. The position of the patient in bed is the essential feature of Murphy's method of treating cases of acute general peritonitis, hence hospitals should have facilities and nurses experience to enable them to handle such cases.

Bladder and Kidneys.—During the first few days after an operation the bladder and kidneys require careful watching to see that they properly perform their functions. If the patient does not voluntarily pass urine he should be urged to make every effort to do so. A catheter should not be employed if it is possible to avoid it, as its use always entails some danger of infection, and makes the patient more or less dependent on it in future. Sometimes, however, it has to be employed to prevent undue distention of the bladder. The quantity of urine should be carefully recorded and if any abnormality is noted a specimen should be sent to the laboratory for examination.

In cases of chronic interstitial nephritis and in cases of acute septicemia and cholemia there is often sudden suppression of urine which may result in death. After operations on patients with jaundice more cases die from uremia than from any other one cause. At St. Luke's Hospital the old treatment of transfusion, sweating, cups over the kidneys, administration of infusion of digitalis, etc., has given very poor results. Recently a new line has been followed, and while the number of cases is yet too few to justify an unqualified statement, still it is believed that a distinct improvement has been made. As soon as any inadequacy of kidney activity is noted su -

phate of spartein is given hypodermically in half grain doses; repeated according to effects at four or six hour intervals. In six cases where there was complete suppression there has been prompt response to the drug, with ultimate recovery.

Bowels.—When peritonitis, either local or general, was more the rule than the exception after abdominal sections, it was the practice to give calomel in large doses as soon as the stomach would retain it. In fact the surgeon was not happy until the patient was freely purged.

That early purgation is a prophylactic against inflammatory conditions is undeniably true, but that it depletes the patient, retards recovery, and is not necessary under modern methods has been proved to the satisfaction of most operators. In a case which runs smoothly, in other words when the abdomen is not distended and the pulse and temperature are practically normal, there is no hurry to purge. Usually a soap suds enema is given 36 or 48 hours after the operation and the bowels afterwards regulated if necessary by the administration of some mild laxative such as cascara or senna. Occasionally, however, symptoms quickly develop which forbode evil, and then broken doses of calomel should be at once prescribed. Should the drug be rejected, or fail to act, it should be followed by enemata. When the abdomen becomes swollen and tympanitic the administration of purgatives by the mouth should be withheld. The bowels are paralytic from distention, and stimulation is ineffective and harmful. In this condition enemata are the sole reliance. Many authorities recommend high injections through a long rectal tube, but this method has not given the results that were claimed for it. In the hands of the average nurse the tube simply coils up in the rectum, and the surgeon himself usually fails in his efforts to pass it through the sigmoid flexure. Fortunately the elevation of the hips on pillows and the slow injection into the rectum with an ordinary syringe gives about as good results, and does not entail as much manipulation or cause as much discomfort. The formula of the enemata used varies, the most common combination consisting of glycerine, turpentine, sulphate of magnesia and water. Hardon, of Atlanta, is enthusiastic in advocating a mixture of one ounce of powdered alum to one quart of water, and at St. Luke's Hospital human bile is sometimes used with good effect. This is only possible when a case of gall-bladder drainage is in the house to supply the needed material. For the past ten years efforts have been made by many experimenters to find a drug which would produce purgation when administered hypodermically, but so far without success. If such an agent is ever discovered it will prove one of the most valuable additions that could be made to our present resources.

Water.—As an empty stomach is one of the best safeguards against vomiting, water should be withheld from a patient for several hours after recovery from anesthesia. If at the end of this time no nausea exists it may be given in small quantities at half hour intervals, and if it be well borne by the stomach the quantity increased until thirst is relieved. The water may be acidulated with lemon juice, or cold or hot tea without sweetening substituted for it. Should vomiting prevent the patient from retaining fluid, thirst may be relieved by allowing the patient to rinse out the mouth with water to get the taste, and injecting a pint of saline solution in the rectum to produce the effect.

Nourishment.—If the patient is very weak nutritive enemata may be used from the first. In employing this method of feeding it must be remembered that while the rectum can absorb it cannot digest, hence nutriment must be in an assimilable form. As good a mixture as any other consists of two ounces of Peptonoids or Predigested Beef and four ounces of saline solution. If deemed necessary one ounce of whiskey may be added. Nutritive enemata should not be given oftener than every six hours, and the rectum should be irrigated once daily to remove residuum or other irritating material. The average patient does not require any nourishment for the first twenty-four or thirty-six hours. In fact many may safely and advantageously be allowed to go without food for two or three days. Dr. Tanner has taught the profession that starvation is not an immediate danger. The case, whose death is attributed to exhaustion, usually dies of some form of sepsis.

The first nourishment given a patient by mouth should be liquid, easily digested and not likely to cause gas in the stomach and intestines. Egg albumen, chicken broth, beef tea and buttermilk fulfill these conditions. After the fourth or fifth day, if everything is going well, soft boiled eggs, milk toast and other semi-solid articles of diet may be added. At the end of the first week the patient may be allowed the ordinary hospital bill of fare.

Tonics.—But little medicine as a rule is given in a surgical hospital. If the patient's appetite flags a tablespoonful of whiskey before meals or a glass of wine or beer with meals is usually more productive of results than distasteful drugs. If the patient feels he is being neglected he should be given tincture of nux vomica or some harmless placebo, with which the market is well supplied.

General Hygiene.—The efficiency of the modern trained nurse leaves but little for the surgeon to suggest in regard to changing bed linen, giving baths, rubbing the back, etc. If there is one point occasionally neglected it is the toilet of the mouth. The proper use of the tooth brush and the employment of antiseptic washes will not only add to the patient's comfort, but prevent fermentation of food by the reduction in the number of bacteria taken into the digestive tract.

Length of Confinement to Bed.—It is of course impossible to have any hard and fast rule as to how long it is necessary to keep a patient in bed after an operation. Each case must be considered on its special indications. A prudent patient may be allowed to sit up sooner than a reckless one. A lean individual will secure a firm cicatrix quicker than a fat one. A wound that unites by primary intention does not necessitate the same length of confinement as one that suppurates. Still there ought to be some consensus of opinion among surgeons of experience as to how long an uncomplicated abdominal case should retain the recumbent position. Unfortunately the beginner who consults literature for the answer to this question will find the expression of very different views. Some surgeons put their appendicitis cases up on the seventh day and send them home on the ninth. Others keep them in bed three or four weeks and discharge them, with many injunctions as to prudence, a week or ten days later. The tendency is to make the patient's stay in the hospital shorter and shorter. This is partly due to improved results, but also influenced by a desire to advertise the surgeon, to make the patient more willing to consent to an operation, to increase the number of cases cared for by a ward of limited capacity, and finally to lessen the money paid to the hospital so there may be more left for professional services. Between too great conservatism on the one hand, with the attendant loss of time and money, and too great radicalism on the other, with the danger of hernia and other complications, there must eventually be derived the happy mean. At present the average surgeon keeps an appendicitis case in bed about two weeks and discharges him in three. An operation necessitating greater weakening of the abdominal wall such as a hysterectomy confines the patient to bed three weeks and to the hospital four. Experience has proved that incisions in the upper abdomen, for liver and stomach work, do not entail the same liability to hernia as openings in the lower abdomen for pelvic tumors, hence the time in bed after the former may safely be less than after the latter. The use of abdominal belts after operations is not advisable unless the abdomen is pendulous, or in cases where the cicatrix is weak owing to the employment of drainage. This last indication for the use of an irksome prophylactic measure has been materially lessened by the present practice of inserting drains, when needed, through stab incisions and closing the operative wound as if no drain had been employed.

The After Care of Wounds.—Clean wounds, without drainage, need not usually be dressed until the eighth or ninth day, when the stitches are removed and a second dressing applied. The three indications for an earlier dressing are pain, fever, or saturation of dressings with wound secretion. Should the wound be uncomfortable when there is no rise of temperature it is probably due to stiffening of the dressings with blood or serum, and redressing will give immediate relief. Should there be a tight stitch with a red area about it, it should be clipped or removed as soon as discovered in order to prevent the formation of an abscess.

Clean Wounds, with Drainage.—These wounds should be dressed as often as the dressings become saturated. Such cases as amputations of breasts or limbs in which there is oozing of blood should have the drain removed as soon as it has ceased to perform its function. This is usually at the end of forty-eight hours. Rubber tubing slips out without pain, and gauze if removed slowly will not give a great deal.

Infected Wounds, with Drainage.—The problem to be solved in these cases is to provide for the escape of the morbid products until the wound or cavity is filled with new tissue, hence we cannot reduce to days or hours the time that drainage should be kept in. Pus will quickly clog the meshes of gauze, so it becomes necessary to remove and replace it daily in order to obtain the best results. The question of when to remove abdominal drainage is often asked, and is difficult to answer. The strips of gauze are placed with their lower end over the focus of infection or into the most dependent part of the abdomen. During the first twenty-four hours the serous drainage is profuse, becoming less and less. In forty-eight hours the intestines, by adhesions, are walling off the peritoneum and forming a plastic canula around the drain. Removal now might break up this wall and reinfect the general cavity. In five or six days there is little danger of breaking up this wall, and the gauze lubricated with pus will slip out more easily than it would earlier. The tendency is to remove the drain too soon. In may cases it may safely be left in place for a week. When the primary drain is removed a smaller drain is substituted and this is removed and replaced daily until cessation of discharge makes

it no longer necessary to do so.

Technique of Dressing Wounds.—That there may be no time lost in needless delays a perfect system system of wound dressing is imperative in a well ordered hospital. A tray is fixed to dress each wound and it should contain every article that is needed. A clean towel covers the tray and upon this are the following articles:

1. An ordinary grocer's paper bag.
2. A pair of bandage scissors.
3. A spool of adhesive plaster.
4. A package of sterile cut gauze.
5. A package of cotton or pads.
6. Ignition tube containing drainage strips.
7. Two sterile towels.
8. A basin of 1-100 warm bichloride solution.
9. Instrument tray containing a pair of sharp pointed stitch scissors, a probe, and dressing forceps.

The nurse places this tray on a bedside table, lets in plenty of light, fixes the gown and bed-clothes, removes the external dressings and unpins the sterile packages. The dresser with clean hands removes the remaining dressings. The soiled dressings are put in the paper bag which is burned in the furnace as soon as the case is finished. The wound is next protected from the bed linen with sterile towels and bathed with bichloride solution. Stitches are removed, drainage replaced when necessary and a fresh dressing applied. In order to save the dressers hands from repeated washings in bichloride, and to prevent them from becoming contaminated, rubber gloves should be worn in dressing wounds. To prevent the possibility of infecting one wound from another, clean wounds should always receive the first attention.

IV. TECHNIQUE IN COUNTRY PRACTICE.

The preparation for an operation in a city residence does not vary materially from that of a hospital. The surgeons satchel contains every needed article. The instruments and sutures are all selected for him, the other necessities are listed and packed in the least possible space. The packages are sterile and sealed; the outfit stands ready to leave at a moment's notice; the preliminary preparations are made by trained assistants who take pride in their work.

The problem that confronts us is, how may good clean work be done in the country without the aid of the accessories of a hospital or the assistance of its staff. The operator must first master the principles of hospital technique. He must have in his mind the model of an operating room, and arrange the position of each table and bowl and pitcher according to this plan. Spare hours could not be better spent by a student or a graduate than in actually preparing such a room for an imaginary patient. Practice alone can make one quick and skillful, and nothing gives confidence so surely as seeing such preparations proceed as though they were an every day occurrence.

The Essential Materials and Implements to be brought by the surgeon are chloroform, alcohol, bichloride tablets, green soap, scrubbing brushes, razor, Kelly's pad, gauze, cotton and bandages. These should be kept packed in a satchel by every one who expects to do surgery. The necessary instruments, sutures and drainage materials can be quickly selected with reference to the case.

The Room in which the operation is to be performed should be chosen with a view to the space and light it affords and the ease with which it can be heated. Obstructive furniture should be removed, but no change made which creates dust. If the room be carpeted a sheet is spread over the floors. A pine kitchen table, two small bed-room tables placed end to end, or a window shutter on two flour barrels will make a good extemporary operating table. By hanging the patient's knees over the end of a kitchen table and putting the two legs of the table on chairs a fair Trendelenburg position can be secured.

The operating table should be covered with a folded blanket and a sheet, and placed with its foot to the window which is to be the source of light. On its right should be a table for instruments, on its left a table for sponges, and beside it a third table or a chair for materials to be used in preparing the site of incision. A washstand should be conveniently located for scrubbing the hands. A bureau will make a good stand for solution basins. All these should be covered with sheets, not alone for the sake of cleanliness but also because the unusual sight serves to keep them from being molested by untaught but too willing hands of relatives.

Materials to be Procured from the Household.—Basins, trays, etc., must be selected from the domestic crockery. Ordinary wash bowls answer well for hand basins. China vegetable dishes make good containers for sponges. A wide mouth pitcher will serve as an excellent plunge bath for the hands; smaller pitchers are useful for solutions. A meat dish makes a good instrument tray. Saucers and butter plates can be used for ligatures and needles. Two milk pails will act as reservoirs for hot and cold water. A sauce pan or kettle can be used as an instrument boiler. Slop jars or tin foot tubs will serve to catch waste water. Needless to say the linen closet should also be levied on and the available supply of clean towels and sheets appropriated.

Hot and Cold Water.—For the first washing of the hands and for the preparation of bichloride solutions to disinfect crockery, linen, etc., ordinary spring or well water can be used. But for final ablutions and actual contact with the wound a limited amount of boiled water must be provided. As the heating and especially the cooling of water takes more time than any other step of the preparation, it must be the one first seen to. Two clean tin buckets are selected and filled two-thirds full of clear water. They are put on the kitchen stove and a hot fire maintained until they boil. One is left on the fire to keep hot, the other taken off to be cooled. This can be rapidly accomplished by setting it in a wash-tub containing cold water and changing the water in the tub as soon as it becomes warm. It is well to have a dipper, which can be boiled in one of the buckets, to use in dipping out the hot and cold water to make solutions of the desired temperature.

Sterilization.—When the furniture in the room has been set in order and the materials are all at hand, the tables are covered with sheets and the work of sterilizing begun. First a sheet apron is put on, and then the hands are scrubbed at the wash-stand as described in hospital technique. Next each basin, dish and pitcher is washed with green soap and water, and immersed in a 1-1000 bichloride solution. The solution bowls are put side by side on the bureau, and filled with alcohol, bichloride solution and sterile water. The vegetable dishes are filled with boiled water and put on the sponge table. Liquid green soap, alcohol, gauze mops, a razor and two pitchers containing bichloride solution and sterile water are put on the scrubbing table or chair. In all the foregoing the clean worker should be assisted by some one whose hands have not been sterilized.

Instruments, Sponges, Towels and Dressings.—While the above preparations are going on the instruments have been boiling in a pot on the kitchen stove. In case the operator has no sterile packages of sponges, dressings, or towels, he has made two or three dozen gauze pads, 4 by 4 inches, and boiled them in towels with the instruments. The pot is brought in and set on the floor. The operator now sterilizes his hands, covers the instrument table with boiled towels and sets all his instruments and sutures in order. The sponges are put in one of the sponge bowls, and the patient is brought in and anesthetized, unless this has been done in an adjoining room.

Preparation of the Site.—When under the anesthetic the patient is put in the Kelly's pad and the site shaved and scrubbed with green soap, and sterilized with alcohol and bichloride solution just as in the hospital case. A sheet is now fixed to cover the body except the area to be operated on. The field is protected by towels which have been boiled or wrung out of bichloride. The surgeon and his assistant again sterilize their hands and the operation begins. The operator picks up his own instruments and the first assistant, in addition to his other duties, attends to the sponge table. When the operation is completed boiled gauze can be put next to the wound and dry gauze and cotton placed over it. The after care of the patient and the wound does not differ from details previously described.

Angina Pectoris.

By Dr. William St John, Bristol, Tennessee.

This subject is too much for a short paper, and all I can hope to present is a few general principles concerning the practical part.

I fear I can only give you that which is old and that you can truly say, "he had nothing to draw with and the well was deep." The old is not always to be despised.

Ribot has said of the failure of senile memory, "the new perishes, and the old endures." The seed that is old produces a new plant.

It is true that there is nothing new under the sun, and yet each sunrise is a new event.

Angina pectoris, known as cardiac neuralgia, breast pang, steno-cardia, pneumogastralgia, &c., is a symptom rather than a disease.

Romberg says it is a hyperaesthesia of the cardiac plexus. Some of the ancient authorities observed the symptoms of this trouble. The historic cases of Seneca, John Hunter, Arnold of Rugby, Dr. Chalmers and Charles Sumner are familiar to most medical men.

True angina pectoris is regarded as a localized anaemia of the heart, due to sclerosis of its nutrient vessels, the coronary arteries. The causes of sclerosis of these nutrient vessels according to Hubbard, are:

1st. Toxic, as from alcohol, tobacco, especially cigarette smoking, malaria and lead poisoning.

2nd. Diathetic, as in rheumatism, gout and syphilis.

3rd. Physical, moral, and intellectual over-strain.

True angina may be mistaken for the so-called false angina pectoris. This, however, occurs chiefly in young girls and hysterical women, or persons of a neurotic temperament.

The pain in this form is simply located in the chest wall, resembling an intercostal neuralgia, and attended with palpitation of the heart and dyspnoea.

The manifestations in this form are us-

ually milder, though they may be quite alarming and it is said even fatal.

The phenomena of pseudo-angina may be accounted for on the theory of vaso-motor constriction of the peripheral vessels leading to embarrassment of the heart, or the vaso-motor spasm may affect the vessels of the heart itself.

If it is true that vaso-motor changes may give rise to symptoms of angina pectoris, and the heart is healthy, it is easy to understand that they will act with greater certainty when the heart is weak, or when its nutrient vessels are diseased.

Men rather than women are more often affected with this trouble. It occurs at middle life or past. It may also be noted that the subjects of angina pectoris are not infrequently men of ability and mental activity. This may explain why so many physicians have this strange malady.

The attack of angina usually comes on during exertion, running to catch a car, stooping to fasten shoes, or following fright or periods of great mental anxiety.

Everything that acts directly or indirectly on the heart by accelerating its movements may be the exciting cause of an attack.

The symptoms are characteristic and striking. The pain is tearing and violently constrictive, comes suddenly and increases with remarkable rapidity, radiating to the back and down the arms, but especially the left one, as far as the inner side of the elbow. It is at times intensely severe and is accompanied by a feeling of impending death.

The sensation has been compared to the sudden grasp of an icy hand, which gradually tightens until it feels like a clasp of steel crushing the heart to atoms. The countenance is pale and anxious, and there is cold dripping sweat with cold extremities. The skin is sometimes an ashen gray, and this is not confined to the paroxysm, and is of diagnostic importance, especially if there be hard arteries. There is no sense of dyspnoea. The pulse is small, tense, irregular and may be infrequent, or at times it may appear unaltered. There may be gastric flatulency, and after the paroxysm a large flow of pale urine may occur.

The attack may last a few seconds or minutes to an hour or more if the patient lives, and may consist of one prolonged attack or many separate and distinct attacks, and in this way may cover a period of a day or more.

All explanations of the pain are purely speculative. You may have advanced arterial atheroma with softening and dilatation of the cardiac walls, and end fatally without a symptom of angina. You may have angina death and post-mortem findings absolutely negative. All of the experiments so far have thrown little light upon the causation of the pain—for instance, the ligation of one of the large coronary branches in a dog produced death in two minutes without pain.

All this suggests that there must be an absence of some necessary e ement to determine the paroxysm. Traube thought it was a cramp of the heart muscles itself. Others have believed it was due to the great stretching and tension of the nerves in the muscular substance.

Burn's pointed out long ago that constriction of arteries resulted in muscular weakness.

Bouley termed "intermittent claudication" to transient loss of power, with cramps in the limbs of horses whose arteries were diseased.

Painful cramps in the legs of old men may be of this origin. This theory of "intermittent claudication" has been advanced by many to explain the phenomena of angina due to coronary disease. It has been believed to result from involvement of the cardiac plexus, which is constituted of nerve fibres from the sympathetic and vagus, and which lies close to the branches of the coronary arteries. The intimate relation of this plexus would explain the pains radiating to the left arm. It is very unlike neuralgia. Neuralgia never ends fatally. Neuralgia has never been known to affect ten men to one woman.

It more closely resembles the gastric crisis of tabes. Is it not possible that some similar toxic agent that causes the tabetic crisis could supply the necessary element in angina? that is a nerve poison or toxine the result of the one specific disease, which stands alone in mystery and malignancy, namely, syphilis. That syphilis can and does cause angina pectoris all admit, but we cannot say that it is the only cause, for the reason that we do not get a clear history in each and every case.

How often does it happen that in the other varied forms of syphilis it is impossible to get a definite history? Nature is unveracious as well as man. Almost every common symptom of a morbid state is sometimes absent. Every indication of a common cause is sometimes absent. Hence assurance is possible only when the common cause can be absolutely excluded.

In the cases of angina pectoris that have come under my observation, there was a frank acknowledgement of an initial syphilitic lesion.

We have seen from the above that true angina pectoris can occur when the coronary arteries are not diseased at all. We have also seen that there may be advanced atheromatous disease of the heart and its

nutrient vessels and no symptoms of angina occur. This is significant.

A tabetic crisis (gastric) occurs suddenly. Has similar alarming symptoms. Sense of impending dissolution, cold sweat, no dyspnoea, body absolutely immobile.

If the patient survives the attack, the symptoms following are quite like those that occur in the after spell of an angina. Of course the differentiation can be made easily by the well known test for tabes.

We recognize this phenomena indirectly as a sequence of the lues.

It is true that in tabes you have posterior sclerosis and do not in angina, but what does this posterior sclerosis have to do with the gastric crisis? It is open to question yet whether tabes is one primarily of the spinal cord.

Arsenic, alcohol and the toxines of diphtheria can produce the essential symptoms of true tabes, namely, loss of knee jerk and in-coordination. This is called pseudo tabes.

Alcohol, tobacco and other unknown poisons can produce the essential symptoms of true angina. This is called pseudo angina.

Martin has pointed out how strangely special the toxines of diphtheria perform. In one instance anesthesia of the soles and palms being the chief sign of the effects of the poison. In others paralysis of the heart and death. Then again the accumulated poison spends itself on the afferent neurons or the up-bearing neurons, causing ataxy.

We as yet, know very little of the nature of toxine, especially the toxines of syphilis. We have no certain identification of the organism of syphilis. The investigations of Metchnikoff and Roux are of definite promise. In the meantime we wait and hope with compulsory patience.

The prognosis of true angina is unfavorable. It is beyond our knowledge to say in which attack the patient will die. The great John Hunter died in his twentieth attack, while Arnold of Rugby died in his first.

The treatment is plain and simple. During the attack there are two remedies, morphine and amyl nitrite, or its kindred remedy, nitro-glycerine. After the patient is over the paroxysm the treatment is to be directed in the line of prevention. All exciting causes should be guarded against; errors in diet should be corrected, including smoking and drinking. A combination of iodide of potash with Fowlers solution of arsenic should be given for two weeks, alternated with nitro-glycerine for two weeks.

This should be kept up for a period of two years at least. The motto for one afflicted with this serious and obscure ailment should be *ne quid nimis*.

A Brief Discussion of Epilepsy with Reference to its Pathology and Treatment.*

By E. H. Brooks, M. D., Reidsville, N. C., Major-Surgeon National Guard of North Carolina.

Ample apology for bringing to the attention of the Society a discussion of such an old and well known disease as epilepsy is found in the fact that the treatment given this disease by the average general practitioner is the same classical one given by our forefathers years ago before the dawn of progressive medicine. It is a most grievous error to regard epilepsy as an incurable disease, and that treatment offers only slight, if any relief. A disease of such gravity, so widely distributed, and found to exist in one case in every three or four hundred people, regardless of age or sex, offers an inviting field for independent research, and should receive our most intelligent efforts. Observation shows that many medical men regard their duty fully discharged when an epileptic receives at their hands large doses of bromides and perfunctory advice in regard to diet and care of the general health.

Such a course is indefensible, and not only unfair to the patient but assumes a question of casuistry with the physician. The writer's awakening along this line came several years ago when an epileptic of great prominence, and a warm personal friend, committed suicide as a result of the treatment given, rather than from the ravages of the disease. Unpleasant memories of this case still linger, and the writer firmly believes that it is a crime against revealed medicine to saturate our epileptics with bromides and then relegate them to that class of unfortunates, who in the providence of God, have been afflicted with a well nigh incurable malady. Under especially favorable conditions the writer was enabled to bring under observation nearly three hundred epileptics in the wards of two large institutions in a distant state. Painstaking study, as far as possible by laboratory methods, was made of the pathologic and morbid conditions of these cases. The results of these investigations are given, not for their profundity or originality, but with the earnest hope that they may be the cause, in some slight degree, of a more extended study of our cases of epilepsy.

1. *Pathology.*—A study of the pathology of epilepsy, unfortunately, does not provide us with a specific, but it does put us in the way of combating some of its most distressing symptoms. The brain proper is found to be structurally intact and approximately normal. Usually there is a small excess of

*Presented at the recent meeting of the North Carolina Medical Society at Greensboro.

lymph in the sub- and peri vascular spaces. The blood vessels show some congestion, but slight, if any, thickening of walls. These changes may or may not be present, but late research shows that there is one constant symptom present in every case of true idiopathic epilepsy: an adhesion between the superior frontal convolution and the dura mater on the left margin of the longitudinal sinus. This adhesion is formed of white connective tissue, varying from the size of a pea to that of a broad band an inch or more in breadth. It is extremely tough and tenacious, and part of the brain tissue comes away with it when forcibly torn from its attachment. This lesion is assumed to be present in all cases of true epilepsy, and it is now agreed by practically all psychiatrists to be the *predisposing* cause of epilepsy. In the only postmortem coming under my personal observation this lesion was found.

2. *Morbid Conditions.*—Consideration of the morbid conditions present is more interesting, since a proper conception of what we have to combat is essential to formulate intelligent treatment. Laboratory experiments show the following abnormalties, beginning with the alimentary canal:

(*a*) *Saliva.*—In all cases either excessive or almost entirely absent. Analysis shows the percentage of tyalin very low or entirely absent. This indicates faulty digestion of the carbohydrates, and gives us a hint as to diet which will be referred to later.

(*b*) *Stomach.*—The quantity of mucous present is excessive, thick and tenacious. Portions of undigested food remain, showing subnormal motility. Pepsin is about normal, while acidity is reduced and sometimes present only by trace. Crainsky removed the stomach contents of a patient in status, filtered it and injected it into the circulation of a rabbit. The rabbit developed typical convulsions, showing that the stomach was a reservoir for toxic material, the absorption of which was the *exciting* cause of the spasm.

(*c*) *Intestines.*—As may be inferred from stomach conditions above noted, intestinal putrifaction is present in a large majority of all cases and the tendency to tympany constant.

(*d*) *Blood.*—Always some anemia, but the most marked changes are found in the plasma. Ammonium carbanate (not carbonate) is greatly increased from normally a trace to approximately .08 gm. Alkalinity of the blood is greatly reduced. The blood is surcharged with some toxic principle which has failed of oxidation. This toxic principle is a cerebral poison, and in practically all diseases where there is a rise of fever (Osler mentions typhoid) the convulsions cease because the toxic matter is burned up by the elevation of temperature.

(*e*) *Urine.*—A much better idea of the metabolism of the patient can be secured, and the changes and abnormalties found in the other part of the body, can, in many cases, be verified in the urine. The alkaline phosphates are increased, showing cerebral excitement, congestion, or extra-metabolic changes in the brain. The B—sulphates are greatly increased, verifying intestinal putrifaction, and pointing to subacidity in the stomach. Ammonia is decreased, showing retention and faulty metabolism of the proteids. Urea is present, indicating hepatic congestion. Indican is present in excess.

(*f*) *Heart and Blood Vessels.*—As is well known the heart of an epileptic is very erratic—sometimes varying between tachycardia and brachycardia. Between seizures the pulse is ordinarily compressible, the arteries soft and dilated, and the circulation equalized. Immediately before, during, or after an attack the heart is rapid and the blood vessels tense and contracted. Confirmation of this can be easily seen. Witness the affect of the inhalation of amyl nitrite in aborting a convulsion by dilating the blood vessels.

Treatment.—Treatment of epilepsy may be considered in two classes: Drug treatment, and Dietetic and Hygienic treatment.

1. *Drug Treatment.*—In a disease where there are so many morbid conditions to be met, it is manifestly impossible to plan a course of treatment applicable to all cases. In addition to bromide (which will be discussed at more length later on) belladonna, antipyrine, ergot, hyoscine, simulo, lactate of zinc, and solanum carolinense, used singly and in combination, have all been championed as sovereign remedies in epilepsy. Flechsig claims good results by the use of his unscientific so-called opium-bromide treatment. This consists in the administration of one grain of opium three times a day, gradually increased to five grains three times a day, when large doses of bromide is substituted for the opium. Belladonna is semi-occasionally useful in some cases of nocturnal epilepsy. Antipyrine seems to do good in some cases for a time, but it is dangerous by reason of its cumulative affect, and the good results achieved are only transitory. Borax was in great favor some years ago but it was soon abandoned on account of gastro-intestinal irritation following its use, and its disastrous affect on the kidneys. The writer believes all the other drugs mentioned are valueless with the exception of bromide, which unquestionably occupies first place in the treatment of epilepsy. It was first used for this purpose by Locock in 1853,

and since that time it has been erroniously considered a specific in large doses by some investigators. While it is true that bromide in small doses does good, it is equally true that it does a great deal of harm in large doses. In fact it is an open question as to whether the good accomplished by large doses of bromide is not more than off set by the harm done. Certainly it is a great error to regard bromide as a specific and to depend on it solely for the treatment of epilepsy. To the brilliant investigations of Crainsky is due our first knowledge of the affect of bromide in the system. He found that bromide dilates the arteries, thus lowering blood pressure and equalizing circulation. He also discovered that when either sodium or potassium bromide is given it is eliminated in the urine as ammonium bromide, showing that ammonium carbanate was acted upon by the bromide and the ammonia eliminated as a bromide. Thus it was seen that bromide met the conditions fairly well. Further experimentation, however, revealed the fact that bromide, especially large doses, is very slowly eliminated and accumulates in the body; and as a final result the blood is loaded with large quantities of ammonium bromide and sodium carbonate. A chemical reaction takes place between these two compounds, called "reaction in bulk" and there is formed again ammonium carbonate and sodium bromide. This leaves the patient like he was before bromide was given, and of course there is a return of the convulsion with renewed vigor —effectually disposing of the theory that bromide is a specific. Many alienists now claim that bromide hastens dementia, and probably is the cause of it in persons suffering from other forms of insanity. Statistics show that ten per cent. of all epileptics become insane. Peterson (American System of Medicine) claims that a larger proportion than ten per cent. of epileptics suffer mental deterioration (dementia) from the too free use of injurious drugs. Certainly bromide must be included in this indictment, as its injurious affect on nervous tissue is readily seen by its Anaphrodisiac and cerebral depressent effect. Mental apathy, confusion of ideas, loss of memory and distressing acne are all distinctive signs of continued administration of bromide. More than once epileptics have come to the writer to get relief, *not* from the epilepsy, but from the unbearable acne, gastric distress and mental depression arising from bromide treatment. Given a condition wherein there exists a predisposition to gastric derangement, anaemia and ultimate dementia, is it right or just, by a system of treatment, to add to these morbid conditions already existant, or to hasten, if not cause, a hopeless case of dementia? The function of medicine is to cure, and in the event a cure is impossible to alleviate: certainly it should not make conditions worse. It is not only a question of sound medicine, but of sociology as well, as to whether it is not better to allow an individual to have occasional epileptic convulsions and make a useful citizen between attacks, than to so deaden his mental faculties that he has no fits, and is also at the same time incapable of intelligent citizenship. Undoubtedly large doses of bromide will for a time keep off the fits, but what is there to be gained in having your patient so apathetic and so dead mentally that he is incapable of throwing a decent fit.

It is barely possible that the names of such famous epileptics as Rosseau, Napoleon, Caesar and Alexander the Great would not adorn the pages of history had they been submitted to this latter day excessive bromide treatment.

In a recent personal communication to the writer, a physician of wide experience in the treatment of epilepsy and formally connected with the Maryland State Hospital for the Insane, says: "It is fast becoming a question whether the bad results from the bromides as ordinarily given do not far outweigh any actual or fancied benefits from their use." The writer finds by consulting reports sent out a few years ago from the Ohio State Home for Epileptics that the average dose of bromide given (single and in combination) by the general practitioner, as far as could be ascertained, was between six and eight grammes daily. It is freely admitted that here is high authority for such large doses of bromide. Hirt says: "The minimum daily dose (bromide) for adults in cases of pronounced epilepsy is eight grammes." However, the writer is constrained to believe that empiricism is sometimes better than routinism. The way to truth is occasionally found better by practice than by theory.

It is far from the purpose of the writer to be understood as believing that bromides have no place in the treatment of epilepsy. He believes that bromides do good, but that they should be given, *not* to affect the brain per se, but for their true physiological affect, viz: dilitation of the arteries, lowering blood pressure and equalizing circulation. Small doses of bromide does this as well as large doses, and this is the limit of its utility. Rarely, if ever, should the maximum adult dose be over one gramme daily. It should be given in combination with those drugs which seem best to meet the condition we seek to improve. Brief reiteration of the most striking morbid conditions will fix the choice of drugs: (1) Tense and contracted blood vessels, (2) Excessive mucus in the stom-

ach and subnormal motility, resulting in intestinal putrefaction. (3) Reduction in alkalinity of the blood. (4) Erratic heart.

The first condition, as said above, is admirably met by bromide; preferably strontium bromide, since no acne follows as a rule. The second condition is best met with calcium chloride. Experiment shows this drug is a most excellent solvent for gastric mucus, and that it stimulates involuntary muscle fibre. So by its use we clear the stomach of mucus, increase and render available the hydrochloric acid, and motility is increased by stimulation of muscular fibre. It is an exceedingly valuable drug as it also hastens the elimination of ammonia, and at the same time acts as an excellent heart tonic and stimulant. Reduction in alkalinity of the blood (3) is best overcome by an alkaline solution given one hour after meals. This also increases diuresis.

Adonis vernalis (4) acts best in steadying the heart. Digitalis is not used for this purpose because (in direct contrast to bromide) it contracts the arterioles and increases blood pressure, while adonis vernalis does not. Combining these drugs in proper proportion we have the following very effective prescription, per dose:

Strontium bromide (or sodium bromide) Gr.	v.
Calcium chloride	Gr. iii to Gr. v.
Ex. adonis vernalis	fl M i to M iii.
Aqua	qs ad ℥i.

M S—Give in wine glass of water three times a day one hour before meals.

A dose of concentrated phosphate of soda once or twice a week acts well in depleting the portal system and freeing the intestines from putrid matter. If meteorism is troublesome it should be corrected by salol given as needed in three to five grain doses.

The writer does not believe the treatment above outlined is a specific for epilepsy, but he has seen its successful trial in enough cases to warrant the belief that it is of undoubted value when used in conjunction with dietetic and hygienic treatment to be considered under another heading.

At the State Hospital for the Insane at Sykesville, Md., this treatment has been given a thorough trial in grand mal in the epileptic wards. In nearly all cases, the writer was told, great good was done. The patients were quieter, more industrious, happy and more cheerful. Three cases are recalled where the convulsions were reduced from 30 to 40 attacks of grand mal a month to 3 to 6 attacks of petit mal monthly. There was no unsightly acne and in nearly all cases grand mal was changed to petit mal. The writer's experience in 12 cases of grand mal, occurring in his own practice and in the practice of brother physicians, who were kind enough to place the case under this treatment, is in line with the above results. The only cases where no improvement was noted were in cases of feeble-minded children. As is well known nothing can be done in cases where epilepsy is established before the mind is developed.

Male epileptics yield much more readily to treatment than do females—just why this is true is not known. Quite recently a new treatment has come forward as a candidate for favor in the treatment of epilepsy. It consists in the administration of sodium cacodylate with bromide. It has won few friends as yet.

2. *Dietetic and Hygienic Treatment.*—(*a*) *Dietetics.*—Moderation should be exercised always, and patient should guard against excesses of all kinds. Supper should be very light.

Allowed: Meats (in moderation) fresh green vegetables, toast, tea, coffee, milk (in some cases).

Forbidden: Fats, potatoes, peas, white bread, molasses, cakes, candies, pies, pastries. Some authorities recommend an absolute vegetable diet, which is probably an extreme view.

(*b*) *Hygienic.*—"Plain living and high thinking" should be the life rule of every epileptic. Instead of brooding over unfortunate conditions, the mind should be directed to high ideals and kept busy with congenial employment. There is not much hope for an epileptic loafer. Exercise in the open air short of fatigue should be insisted upon. Punctilious regularity should prevail in everything—excesses in nothing. A Schott bath occasionally is of advantage. A modified lurkish bath at intervals, when possible, is sometimes of value.

Conclusion.—The writer wishes it understood that in this discussion his use of the term epilepsy refers to the genuine classical form, and not to those various pseudo forms arising from traumatism, fright, eye strain, peripheral irritation, etc. However much these spurious forms may clinically resemble the genuine article there is a vast difference in both pathology and treatment.

The difference is even greater between the so-called Jacksonian (cortical epilepsy) and the genuine epilepsy. Such abuse of terms is unjustifiable.

No reference has been made to the surgical treatment of epilepsy, as any condition ameniable to surgical treatment is not true epilepsy. Peterson (American System of Medicine) says that out of some 2000 cases coming under his observation not more than 15 or 18 were considered subjects for surgical treatment, and that out of 12 or 13 of this number operated upon, not one was cured. Trephining does little good, since in nearly all cases a new cicatrix is merely substituted for the old focus of disease.

The proposition to cure epilepsy (advanced some years ago in a frenzy surgical enthusiasm) by ligating the vertebral arteries has rightly been consigned to "innocuous desuetude." Hypnotism has not been mentioned as a remedial agent because it has proven valueless. It is not within the scope of this paper to discuss these matters even if the writer so inclined. The discussion seeks to be brief and suggestive, rather than exhaustive or profound—clinical rather than didactic.

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Fracture of the Hip Joint.

By W. A. Bryan, A. M., M. D., Nashville, Tenn.

Every general surgeon and practitioner will appreciate the value of a study of this condition, when he recalls some of the cases he has seen and treated, together with the results of his efforts or the failure of his diagnosis. The condition where near the head or within the capsule is called "old woman's fracture" from the frequency of its occurrence in old women, and possibly, too, the ease with which the fracture is produced, and the outcome of the lesion reunited fracture, considerable shortening, ansbylosis, or death. I have attempted in this paper not to advance new theories and methods either of diagnosis or treatment, but to select from the field such practical facts as I have found beneficial to me in handling such difficult and unsatisfactory fractures.

The head of the femur is developed from one center, while the neck is an outgrowth from the shaft, and thus the blood supply is, as can be seen for obvious other reasons, furnished through the neck to the head. A small artery enters the ligamentum teres through the cotyloid notch, but gives little if any nourishment to the head of the bone. Besides numerous small arteries, one of considerable size is furnished the head from the internal circumflex, and several arteries enter the neck. Next, the capsule of the hip-joint, or the capsular ligament, completely surrounds the acetabulum at its inner attachment, and at its outer end is attached to the inter-trochanteric line anteriorly, to the inner edge of the base of the trochanter major above, and posteriorly about $\frac{1}{2}$ to $\frac{3}{4}$ inch internal to the posterior inter-trochanteric line. Thus it is seen that this ligament not only completely surrounds the articulation, but ensheaths the whole femoral neck except a space a little more than $\frac{1}{2}$ inch in breadth at the outer end of the posterior surface. Lying inside the capsular ligament, but not nearly coextensive with it, is the synovial membrane which covers the articulation and reaches for a variable distance on to the neck.

Another interesting structural point is the fact that the dense posterior wall of the neck is not continuous with the posterior surface of the trochanter major, but extends into the cancellous tissue of the bone as a dense plate, acting as a brace to strengthen the neck. When senile changes come, this plate disappears more or less completely and by so much weakens the resistance of the neck to strains.

As far as the time-honored classification of these fractures into intracapsular and extracapsular, and the belief that one is curable, the other not, resulting in death after a few months, or permanent disability, goes, we may say that the facts of today are not entirely at harmony with it, however convenient that classification may seem. Again, as far as differentiating between the two clinically goes, I must confess my inability satisfactorily to do so in every instance, and my skepticism at any one else having that ability. It seems that one could far more easily differentiate between intra- and extra- articular fractures and this is more probably what is generally understood by intra and extra- capsular. Theoretically, the difference is very beautiful, as Hamilton has pictured in elaborate parallel columns. Post-mortem, however, we find fractures completely within the capsule, others completely within the synoviol sheath, others completely without one or both of these, and still probably the greatest number partially within, partially without, the capsule. Furthermore, the reason for making these clean-cut distinctions has a diminished value since it has been shown that no matter at what exact point the fracture occurs the prognosis depends on the vitality of the patient, the parts involved and the pursuit of a rational method of treatment; I may say, it depends on the blood supply

and the condition, natural or accidental, of the arteries supplying the inner fragment. Of course, if we say the extra-capsular variety occurs in the young where the blood supply is good, and intra-capsular in the decrepit old where the blood supply and the condition of the bone are poor and where the arteries are more or less atheromatous;—that is equivalent to saying the prognosis of the former is good, of the latter poor. And yet this fails to prove that an intra-capsular fracture does not reach beyond the capsular limits or vice versa. It would give perhaps a more clear conception of the facts to say that in the old we have fractures of the neck near the head and ranging outward in an inverse ratio to the distance from the head. While in the young we have fractures of the neck at its base ranging inward, i. e., at frequent intervals extending into the capsule and sometimes into the synovial cavity. It must not be forgotten, however, that separation at the epiphysis does occur in the young, producing distinct intra-capsular fractures.

The cause of these fractures is a priori more violent in young patients than in the old. The change of obliguity concurment with age, as observed by Rodet and others, amounts to an average of three degrees, an insignificant difference even to be thought of as being responsible for the great increase in the percentage of fractures after 50 years, while the extremities of range in childhood and adults are 121 degrees to 144 degrees, with apparently no larger number of fractures occurring near the smaller figure. The usual cause is a fall, such as is produced by a slip and a drop of the patient to the sitting posture; a misstep, as when the patient steps unwittingly to a level lower than that at which he is walking; an unusual muscular strain; a turn produced by rotating the body when the foot hangs against some unevenness of the ground or floor; the lifting of a heavy weight, such as a pail of water. There are many cases on record whose chief interest is to show what the simplicity of the cause producing the fracture is. Some of these show clearly that at times the fall is the result, not the cause, of fracture. Add to these the influence played by senile osteo-porosis, which produces thinning of the shell and enlargement of the meshes of spongy bone, muscular action and ligamentous strain.

Fracture of the femoral neck is at times incomplete, when the name infraction is applied; again, it is complete and the fragments are separated, or impaction may result, the last usually happening when the neck is separated from the shaft and driven into the cancellous structure of its upper end, often the result of force applied directly to the trochanter major.

Fracture of the hip joint should be diagnosed with as little manipulation as possible, for the search after a positive diagnosis, or a demonstration of crepitus to all bystanders, is capable of leaving a much worse prognosis, from the periosteal bridge and the arteries supplying the proximal fragment. It is much more important to the patient to be certain of a useful leg than it is for the surgeon to be certain of crepitus. Let me emphasize this point: we can usually make a satisfactory diagnosis without eliciting crepitus, and the discovery of this symptom too often costs more than it comes to. Usually there is shortening dependent for amount on the point of fracture and the extent of injury done the soft parts. In cases of impaction the total shortening is present on the surgeon's arrival; in other types it is capable of increasing continuously and rapidly or slowly for an indefinite time. Lengthening is a rare exception, in which the inner fragment is displaced upward. The use of Nelaton's line or Bryant's line will determine the relative position of the trochanter major to the fixed points of the os innomniatum. Eversion of the whole lower extremity is characteristic, without the presence of flexion either at the hip or knee. Sometimes angular deviation of the neck can be felt by deep pressure in the upper part of Scarpa's triangle, "lack of depressibility," as Stimson puts it. Swelling over the whole hip is present, with obliteration, partial or complete, of the inguinal and gluteo-femoral creases. Relaxation of the muscles and fasciae surrounding the articulation is an important sign, particularly of the tensor fascia latal and the glutei muscles. This is produced by shortening and is in exact ratio with it. Ecchymosis appears sooner or later, but owing to its frequence in subcutaneous lesions is not valuable. Pain and loss of function are present. The former is excruciating under active or passive motion unless the fracture is impacted; and it is felt in the upper and outer part of the hip when the break is near the trochanter; in the inguinal region if it is near the head. In impacted fractures loss of motion may be insignificant; in those well within the capsule the knee and thigh can be actively flexed and the foot drawn up toward the buttock but not lifted from the bed; in those nearer the trochanter major, the extra-capsular, motion is completely lost. It is possible now and then for a patient to take a few steps with a recent impacted extra-capsular fracture. The age of the patient and the insignificance of the cause are valuable points. After 50 years of age a large percentage of fractures are of the hip; after 70 years one-third of all fractures are at this site.

The outcome of these fractures is uncertain. It may very truly be said that the feebler the patient and the closer the fracture to the head, *aliis paribus*, the smaller the chance of bony union. In intra-capsular fractures, bony union does not frequently occur. Senn could find only 54 well authenticated cases, although I am persuaded this by no means represents the total. Many successful cases go unreported. Still it is safe to say that a large percentage of intra-capsular fractures heal by fibrous union and thus fail ever to give perfect functional results, the patients usually requiring crutches or a cane at best for ambulation. Yet I am sure I have seen several cases of this type, as far as one's diagnosis may be trusted, that have shown osseous union, since the appearance of an enormous callus was present. The failure of union is largely due to impossibility of proper immobilization, the destruction of blood supply to the head either by injury *per se* or by a too extensive examination, and to the senile changes generally present. Extra-capsular fracture is more frequently impacted, and whether impacted or not the inner fragment is always better supplied with blood. Hence union is the rule here. Impacted fractures if not separated by the surgeon heal with bony union.

Suppuration of the joint, fat-embolism, pneumonia and decubitus are likely to occur and take away the patient. Again, any chronic disease already present may become worse during treatment of the fracture. Hence the prognosis is not near so good as in ordinary fractures.

In treating these cases, it must be remembered that often the patient's general condition and the probability of complications are the primary considerations and the fracture entirely secondary.

Where it can be done, immobilization is the best treatment. If this cannot be done, then the choice of treatment of the closest approximation to it must be made. I usually apply Buck's extension with sandbags placed laterally along each side of the limb for several days or a week, and then apply a plaster-of-Paris cast from the umbilicus to the toes, and leave this on at least six weeks. As an alternative, in the very old or very stout I use the extension and a Hamilton's long external splint. Thomas' splint is most excellent but needs to be adjusted to the patient and is more expensive. It becomes necessary in certain cases to use only the bags of sand and extension. An objection to the plaster cast is the requirement of a supine position for so long a period. The general care of the patient must be effected to the minutest detail. When plaster-of-Paris is used, or other methods for that matter, much discomfort may frequently be relieved by a slight turn or movement of the extremity. Bed sores must be anticipated by rubbing all red spots with alcohol and following with a dusting powder. In case shortening is not sufficiently overcome by extension the limb may be fixed in an abducted position to restore the normal angle of the neck and shaft. In all cases of old people the patient must be lifted to a reclining or sitting posture as soon as possible. The bed must be firm and admit of no sagging.

A Case of a Pustulopapular Syphilide of the So-Called Varioloid Type.

Shillitoe (British Journal of Dermatology) says before the history was known, it was thought to be a well marked case of smallpox. The present case gave the following history: The patient was a well nourished man, twenty years of age, a warehouseman by trade, whose height was 5 ft. 3 in., and weight 113 lbs. There was nothing in the family history bearing on the question, and with the exception of an attack of gonorrhea four years before, he had no recollection of ever having been ill.

Early in February of the present year, he noticed a sore on the inner surface of the prepuce, this date being about one month after the last exposure to contagion. He consulted no one till March 21st, when finding he could not retract the prepuce, he attended a hospital, where he was given a lotion to thoroughly irrigate the part. On April 23rd, a general eruption appeared together with a sore throat. His people, fearing that he had something infectious, refused to allow him to stay at home; he went to the Union, from which institution he was transferred to the Lock Hospital. On admission he was obviously ill, almost too much so for purposes of exhibition, and it was extremely difficult to obtain any straightforward history from him. The body was almost entirely covered with a marked papular eruption with the exception of the cheeks and oral region, both wrists and hands, the scrotofemoral regions, and the lower half of the dorsa of both feet. Thickly scattered between the papules was a very large number of pustules, many of them, especially on the back, showing umbilication. Each pustule was about the size of a large hemp seed, and was surrounded by a deep red areola without any marked basal thickening.

Taylor, of New York, says: "These pustules have no tendency to a follicular origin, but are found on parts where the skin is soft and delicate." Further he states that "it is rarely the first eruption in syphilis. The mode of invasion is slow, beginning on the face and spreading over the body in two or three weeks." In this case the erup-

tion was apparently the first symptom which frightened the boy, and the mode of invasion was very rapid, having spread between April 23rd and 26th over the whole of the body. Mr. Hutchinson quotes an example where there was, as in this case, marked febrile disturbance, which Taylor thinks is not usual. Bangs and Hardaway point out that when these lesions occur in the early secondary stages as a general eruption, they may be accompanied by a marked febrile disturbance, which is higher than in any other form of syphilis, and pyogenic organisms undoubtedly play an important role in causing it. The manner in which the eruption avoided the exposed parts, the face, wrists, and hands, so often the seat of a smallpox eruption, was very noticeable.

The Relations Between Carcinoma Cervicis Uteri and the Rectum.

Sampson (Johns Hopkins Hospital Bulletin) says that the relation between carcinoma cervicis uteri and the rectum may manifest itself in the rectovaginal fistulæ which result from a necrosis of the growth which has involved the rectum in the posterior extension of the disease, and also in accidental injuries to the rectum occurring during hysterectomy for the disease.

The relation between the uterus and the rectum varies under different conditions, and is dependent on the position of the uterus in the pelvis, whether in normal anteposition or retroposition, and especially the left and right lateral positions of the uterus. Descensus of the uterus also changes the relation between the two organs. The position of the uterus in the pelvis is a most important factor in determining what surrounding tissue may be invaded in the extension of the growth from the cervix.

The rectum may be invaded by a direct extension of the growth either through the cul-de-sac, the two surfaces of which have become adherent, or the posterior vaginal wall may become involved and the rectum secondarily invaded from the vagina, or in the lateral positions of the uterus the growth may extend across the obliterated cul-de-sac from the parametrium, which lies in front of the rectum, and which may have been invaded by the growth.

The first demand in the more radical operations for carcinoma is a wide excision of the primary growth, and portions of the rectal wall may be sacrificed and repaired if involved by the growth.

Diagnostic Value of Laryngeal Paralysis.

Bonwell in The London Medical Lancet says that in adductor paralysis there may be no disturbance of vocalization; here the affected cord lies in the median line, and during phonation the sound cord adducts to meet it and the larynx appears normal. But on inspiration the affected cord remains stationary while the sound cord is drawn outward and backward. The voice is not altered, but there is some dyspnoea on active exertion—so severe sometimes in children as to require tracheotomy. In bilateral paralysis the cords are drawn closer together on inspiration and dyspnoea accompanied by strider is a marked symptom. Severe paroxysmal exacerbations may occur at any time and prove fatal; so tracheotomy is indicated as a precausionary measure. Phonation is good but has a breathless character. The causative lesion of the paralysis may be situated in the medulla; or at the base of the brain; or in the vagus; or in the recurrent laryngeal nerve. In the first two of these conditions neighboring nuclei are prone to be affected as well, so that there is usually concomitant paralysis of the soft palate, uvula and pharynx. Persistently frequent pulse indicates bulbar disease. Bulbar paralyses are frequently bilateral, tabes dorsalis being the commonest cause. Syphilitic nuclear disease, gummata at the base of the brain, and syphilitic pachymeningitis are also common causes of abductor paralysis. Disseminated sclerosis seldom produces paralysis. Of peripheral causes neuritis is a frequent factor; it may be toxic (lead, alcohol, arsenic) or infective (diphtheria, typhoid, influenza, etc.). Paralysis from involvement of the vagus is usually due to compression of the nerve from aneurism, enlarged glands (usually tuberculous) and cancer of the oesophagus. Occasional cases are mediastinal growths, pulmonary consumption, goitre, etc. Aneurism is the most frequent cause of laryngeal palsy, inducing glottic spasm and the "brassy" cough which later becomes wheezing in character. Left vocal cord paralysis may be the earliest sign of aneurism. Tuberculosis acts either by pressure of bronchial or tracheal glands, or by involvement of the nerve in infiltration at the apex of the lung. The association of laryngeal palsy with a thyroid tumor, though suspicious, is not conclusive proof of malignancy. Adductor palsies always affect the phonatory function. They are usually bilateral and not due to organic disease of the nerve path. Functional aphonia manifests hysteria (both in men and women, coming on suddenly and disappearing as rapidly), however, anything which makes phonation difficult (debility, thickening of the cord, laryngeal catarrh) predisposes to hysteria. Unilateral adductor paralysis is very rare.

Nutrivine.

One of the most difficult things that the doctor has to contend with is to procure a reliable article of Cod Liver Oil. In Nutrivine, prepared by the Peter-Neat-Richardson Co., Louisville, Ky., will be found an example of a properly prepared medicine of this character. It contains the properties of the best Norwegian Cod Liver Oil, without its nauseous and offensive taste.

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THE FUNCTIONS OF THE BILE.

The bile has no direct digestive action on proteids. It is, in fact, antagonistic to peptic digestion. It is alkaline and precipitates the parapeptone peptone pepsin and bile salts, which redissolves in this alkaline medium, but the pepsin though redissolved remains inert towards proteids.

It has a slight solvent action on fats, slight emulsifying power and forms soaps with fatty acids. Outside of the body it hinders various putrefactive processes and when prevented from flowing into the intestine the contents undergo changes which give rise to the appearance of various products, especially of ill-smelling gases.

The various actions of the bile seem to be due to the bile salts, other constituents playing no part in the process of digestion.

Bile has been looked upon by some as being one of the important channels by which certain poisons and ptomaines are eliminated from the system. Experiments with animals have shown that certain poisons appear in the bile before appearing in the urine, but only small amounts appear in the bile so that its power of elimination is very much limited. Especially is this true when one considers the possibility of some of the material being reabsorbed by the mucus membrane when the bile is poured into the intestine.

The idea that bile possesses certain eliminating properties was conceived by the results obtained in certain cases of generally termed bilious condition by using drugs belonging to the purgative group. Many of these drugs were looked upon as cholagogues and were employed not only when decreased secretion of bile was assumed, but also when obstacles to the outflow of bile existed. A more careful analysis has shown that the conclusions reached were in many instances wrong, and that the error was caused both by the increased evacuation of the intestine that followed the administration of many of these drugs and by the coloration of the feces by other substances.

The drug that has been used for this purpose and has long been looked upon as an indirect, if not a direct, cholagogue is calomel. Corosive sublimate has been considered a direct cholagogue, yet neither these nor any of the constituents of the much lauded liver pills are contained in the list of drugs that actually cause an increased secretion of bile as reported by Prevost and Biuet, who by employing dogs with biliary fistula found on introducing different drugs, either subcutaneously or by the mouth. It was found by these observers that calomel instead of increasing the amount of bile decreased it, and that corosive sublimate exercised no influence at all. Aloes, cathartic acid, rhubarb, sodium sulphate sodium chloride, and sodium bicarbonate are among the list whose action is inconstant or doubtful.

Taking the above experiments into consideration the question naturally arises how does a purgative relieve a case of biliousness or ptomaine poisoning?

In taking up this question the detoxicating function of the liver must be considered. Carbohydrates and fats are not the only substances that are stored in the liver. Some of the heavy metals such as iron, copper, mercury, arsenic and antimony suffer the same fate. Therefore, the liver exercises a protective function either by storing or by excreting poisons circulating through the body.

This protective action may be excreted in three ways. (1) The poison may be rapidly excreted by the bile. (2) The poison may be stored in the liver, in which manner the poison is removed from the general circulation and thus instead of producing acute poisoning causes a more mild and protracted form. (3) The poison may be chemically transformed into a less harmful substance.

The specific character of the circulation and of the chemism of the liver that causes the storing of important nutritive substances has probably the same action in regard to other substances. This detoxicating function is also characteristic of other organs and some believe that the epitheleum and intestinal wall has a greater protective power than the liver.

Therefore, in those cases of biliousness or ptomaine poisoning where the ptomaines and by-products of intestinal fermentation are in excess and have overcome the protective power of the intestinal wall and have been carried to the liver by the portal circulation and are here stored up or destroyed the digestive process will go on until the amount of toxic products can no more be cared for by the hepatic cells, and then will be carried on into the general circulation, producing various conditions from mild bilious attacks to coma and death.

Therefore, the relief afforded by giving purgatives in these conditions does not depend on the increase in the amount of bile excreted, but on the mechanical and antiseptic action of thoroughly removing the fermenting material from the intestine as well as cleansing and destroying the ferment present.

This, like many other conditions, when the cause is removed soon regains its normal functions.

PALPITATION OF THE HEART.

This neurosis of the heart is not to be confounded with the temporary fluttering of the rythm of the heart, witnessed so frequently and passed without comment by the physician, and the patient as well after a short time, and without treatment.

There is a real condition which has apparently to do with a permanent injury to the vagus, or a congenital defect in that nerve. The condition is more frequently seen in the initial period in children before puberty, but after the condition has become established the intervals of attack occur at longer periods, but the severity is often increased. The entity is worthy of notice, inasmuch as many men who have been in practice for many years have never seen an intractable case that they could dignify by the name of true palpitation. The patient if the case has existed from childhood, with increasing severity, as age advances is usually the least concerned, but the surrounding family are in a state of great excitement.

The cases develop usually in men or women with a neurotic family history, even though the patient seems to be perfectly balanced, and to know no fear of the disease.

Men are as frequently attacked as women, and the attacks come without consistent warning. Occasionally some patient will say after the attack has materialized "I knew it was coming," because some peculiar feeling was experienced, but when cross examined it is usually found that the very symptom has been experienced many times without resulting attacks. There is no time or place preferred for the beginning of an attack, and it not infrequently will occur at night even when the patient has retired with little or no supper, and certainly without an over-eating of starch in indigestible form. Men with important business cares, walking not over fast, with splendid physical development may have an attack of such severity that they cannot continue with their usual vocation for periods of differing lengths, from a few minutes, and recently I saw a case that continued for a period of 14 hours, with sudden onset, and as sudden remission, and that without showing any of the results to be expected from the recognized treatment such as it is.

Most attacks are but for a few moments, and it is not infrequent to find a man who has had the attacks for years, since he was a child, in fact, and no member of his dependent family know of the existence.

The pathology is not well understood, and only an indefinite connection from the history of the case attaches much importance to general neurotic tendencies. The patient is attacked when about his usual vocation or pleasures, becomes somewhat paler than usual, if the attack continues more than a few minutes, will become nauseated, will feel better in the recumbent position, usually wishes to be let alone, and not fussed over, and in most cases if the attacks have not reached such a stage that they are longer than one hour, no Doctor is called. Eventually there is so much pain attached to the long attacks that the patient is unable to proceed with the usual routine, and some one has to be told, and unless unusual conditions arise the Doctor has to be informed. The pain is apparently as severe in the short attacks as in the longer ones, but does not exhaust and so relief is not sought. The case is apparently little affected by any drug, and digitalis, strychnia, cactus, nitroglycerine, gelsemium, strophanthus and all the rest are of little avail.

The pulse that runs normally in the adult subject at from 72 to 74 will suddenly flutter, seldom becoming arythmic, but at first suddenly jumps up to 120 or 140, then returns for a minute or two to the normal, then without rhyme or reason returning to 140 to 160 and then to 190, and it may continue at that figure for a period of ten hours or more. The pain is distressing, exhausting, and would be if the patient had not become used to this since childhood, make even a patient with good nerve, feel that something should be done more than was being done, whatever degree of efficiency such treatment had reached in the patient's appreciation.

It takes, in my opinion, rather dangerous doses of morphine to overcome the pain, especially since we are dealing with a condition that suddenly subsides, as does kidney colic, and who has not seen cases of the latter in which the calculus having passed soon after the giving of "just one more hypodermic" and in which the patient will sleep altogether too soundly for several hours?

The same danger arises in these cases the condition subsides usually suddenly, and if anywhere near sufficient morphine has been given to cover the pain, the patient will suddenly realize on the morphine and will sleep for hours, still further alarming the family.

I believe heart stimulants should be given sparingly, morphine sparingly, ice bags to precordium constantly, confidence given to the family, and to the patient if necessary, and to any patient who has reached a condition alarming enough to have attracted the attention of the family and so have had a Doctor brought in, sufficiently guarded prognosis so far as the length of time nec-

essary for the attack to subside, needs to be given so that the Doctor's judgment will not be questioned in the future.

Most attacks subside (and entirely of their own caprice, I believe) within the hour, but in patients past 40 the attending Doctor must remember that they may last for fourteen hours, but not very often.

SEPTICÆMIA.

Flint, writing in 1873, said that septicæmia belongs rather to surgical than to medical pathology. In 1901, Osler said that for one case of septicæmia seen in the post-mortem room at the Johns Hopkins Hospital which comes from the surgical or the gynæcological department at least fifteen or twenty are seen which come from the medical wards.

Formerly septicæmia was considered to be the result of the absorption of toxic products only and pyæmia was thought to be the result of the absorption of the micro-organisms themselves, particularly as emboli. Or, if this distinction was not sharply made, there was a tendency toward it. The bacteriological study of the blood in various infectious diseases is showing that in many cases with toxæmic symptoms only, the organism may be obtained from the circulating blood. This is notably true of typhoid fever and pneumonia. In this connection the report of five cases of general septicæmia by Duval and Lewis (*Journal of Medical Research*, August, 1905,) is of interest.

In the case of a man, who complained of painful swelling of the right leg and general body pain with a tendency to localization in the larger joints, bacteriological study of the blood demonstrated a pure culture of bacillus mucosus capsulatas. The patient recovered but at the time of his discharge there was more bacilli circulating in his blood than on admission. This fact indicates that in addition to the acquired immunity to soluble bacterial toxines and the acquired bactericidal immunity, the human body may have other mechanisms of protection against bacterial infection.

In the case of a freight handler, who had been working on imported hides, the patient had cut his chin while shaving, one week before admission to the hospital. Three days later he noticed a small crust at the site of the wound. This increased in size rather rapidly until it became the size of a dime. It was black in color and was surrounded by a raised, inflamed area from which a few drops of seropurulent matter could be expressed. The bacteriological examination of the blood showed a pure culture of bacillus anthracis of low virulence. Three weeks later a blood culture was sterile.

In the case of a hostler, who had been in contact with glandered horses, the patient had been sick seven days with chills, sweats, and pain in his chest, with a right sided pneumonia. There was a polymorphous skin eruption, and there were abscesses on his right thigh and on both forearms. A blood culture made two days after admission and three days before death gave a pure culture of bacillus mallei. The bacillus obtained by blood culture was identical with bacilli obtained from the organs post-mortem.

The authors also report two cases of general infection with the gonococcus.

PILOCARPIN IN THE TREATMENT OF BERI BERI.

Manson says that "medical visitors to the native hospitals in many parts of the tropical world are likely to have their attention arrested by the large proportion of cases of partial paraplegia, of cases of œdema of the legs, and of cases of general dropsy. These, for the most part, are cases of beri beri." The tropical physician, returning to a temperate climate, looks upon patients who complain of pain in the legs with œdema as cases suggestive of beri beri. The treatment of this disease is not entirely satisfactory, so that any new procedure should be welcomed and tried out. Gerrard (*Journal of Tropical Medicine*, September 15, 1905) reports the case of a Chinese, who was admitted to the hospital with diarrhœa of a dysenteric type for which he was treated with routine measures for more than a month, with indifferent success. At the end of that time pretibial œdema, diminution in the excretion of urine, and other symptoms appeared which led to a diagnosis of beri beri. Among other therapeutic measures the patient received hypodermic injections of pilocarpin. Ten days after the administration of the first dose of pilocarpin the œdema was noted as rapidly subsiding and six days later it had disappeared. There was an attempt at a relapse later; but four injections of pilocarpin apparently resulted in cure. The pilocarpin not only benefitted the œdema but also seemed to act as a curative agent on the disease itself. The doses used were one-third and one-sixth of a grain.

To conclude that because a train of symptoms undergoes modification following the exhibition of a drug the drug was the cause of the improvement is often erroneous. But in many diseases certain drugs appear to assist the economy in its reaction to the ætiological factor. Further observations may confirm the experience of Gerrard.

THE VIRGINIA MEDICAL SOCIETY AGAIN ADVANCING.

A little more than a year ago we had occasion to refer to the then very manifest

evidences shown by the membership of the Medical Society of Virginia, of the possession of a professionally progressive spirit and a disposition to adopt an up-to-date plan of organization which would place the State Society upon the basis of medical organization now current practically in every State of the Union except Maine and Virginia. But the meeting of the Society in 1904, after a two-days flood of more or less stormy oratory under the forceful guidance of a few gentlemen who did not care for the local organization of the masses of the profession, defeated the proposed revision of the constitution which would have made the county Societies, as they are in North Carolina and other States, essential and important factors in the development of the profession. This action, the opponents of developing the local organization of the profession declared, settled the matter for at least two years.

At the recent meeting (October, 1905), of the Virginia Society there was considerable discussion over a proposition to admit to membership certain elderly gentlemen who are non-graduates of medicine, but who are practitioners of regular reputable medicine and recognized by the Virginia statutes as legal doctors. The majority of these applicants were men who had taken a partial course, or courses, in medical schools during the years of not over-plenty in the South following the civil war, yielding to the demands of their local communities began the practice of medicine and never completed the course leading to the degree in medicine, and in 1885 when the laws regulating the practice of medicine in Virginia went into effect a statutory provision made entitled them before the laws to all the rights, privileges and immunities enjoyed by graduates, or future licentiates of the State Board of Examiners.

The Society "by an overwhelming majority agreed to suspend the rules and admit all such practitioners." We cordially commend this action of the Society as eminently wise and proper from every view point, for with the State of Virginia standing behind them, and giving them equal rights before the laws as graduated and licensed physicians, it was only justice to them and to the State as well to accord to them ample opportunities to participate in the meetings of the State Medical Society and to enjoy all of the privileges of professional development growing out of its meetings from year to year.

But in passing we can but express our surprise at the tardiness of action in this matter of our Brothers of the Old Dominion. At the annual session of the Medical Society of North Carolina at Asheville in 1891, this same matter was duly considered and favorably acted upon, since which time a number of excellent men falling in this class have affiliated with the Society and its component branches to mutual advantage. In this vital matter of recognition of rights of all legal reputable practitioners of regular medicine the North Carolina Society has, it seems, been able to set an example worthy of the emulation of our esteemed confreres, as we did in the matter of establishing State Board of Medical Examiners. Our Board was created in 1859, theirs in 1884. We congratulate them on the following of wise precedents and commend them to further energies in the same direction. Though their tardiness in emulating a good example can but forcibly call to mind to those of us who studied medicine in Richmond on the James, the celebrated sermon by the old Virginia negro preacher, the Rev. John Jasper, delivered with much force and fervency twenty years ago entitled "De Sun Do Move."

AMALGAMATION IN VIRGINIA MEDICAL SCHOOLS.

It is currently reported that a committee from the Medical College of Virginia at Richmond and the Medical Department of the University of Virginia at Charlottesville, have in hand the matter of arranging the details of a formal union of the two schools of medicine. At this time we are not fully advised of the details of the proposed amalgamation, but from information at hand it is assumed that the union contemplates the giving of the first two years instruction in the fundamentals at the ancient seat of the University proper at Charlottesville, with the two final years given to the consideration of the more practical branches of medicine at Richmond.

For both institutions North Carolina doctors have a kindly feeling, as not only have a number of the State's leading doctors attended lectures in the institutions, but it has likewise been our privilege to furnish some of the most talented members of their faculties—not to mention the older men, the names of Barringer, Manson, Long, Hodges, Whitehead and others, confreres of the men of today, attest the latter fact.

We believe the union of the two institutions to form the Medical school of the University of Virginia will be beneficial and productive of good results. We congratulate all parties at interest and bespeak for the new institution, if we may be pardoned for so referring to it, the cordial support of the profession.

INTESTINAL OBSTRUCTION IN CHILDREN.

This condition in children, during the past year has received much attention at the hands, not only of the pædeatrists, but of

surgeons in general; and there is the greatest need that this subject be earnestly studied and the members to an individual be thoroughly prepared to recognize, at the earliest possible period, the existence of the disease when they have it in hand; and to know the possibilities which may be obtained for the sufferer, since the prognosis of the affection is bad and the mortality up to the present time has ranged criminally high. I say criminally, because in these days of asceptic surgery coupled with the fact that children, under proper precautions bear surgical operations well, there is no reason why these affected individuals should not have the benefit of surgical interference and profit by the refined results of asceptic surgery. Then, too, the profession will have the satisfaction of knowing and feeling that their duty has been done, and be entitled to reward rather than censure. Let no physician dismiss the subject, by supposing that the occurrences of the disease are so rare that he may never see a case. There is no physician in practice but who may be called suddenly to see a serious case and have the discomfort of knowing that his little patient died in agony before he had realized with what he had to deal. Roth is convinced that intersusception in children occurs much oftener than is generally supposed. Erdman saw four cases of obstruction in four weeks. Riddle saw three cases in a family of four children; and Rigby saw seven cases in nine weeks. These are exceptional instances, but they go to show that the disease is not so rare and that the symptoms should be kept in mind by every physician.

Obstruction is classed as such whether by occlusion, strangulation, intersusception, tumor, enterolith, internal hernia, volvulus or from constriction by a band, and the classification of "true and false obstruction should be abandoned." Let the indications or diagnostic signs be thoroughly mastered so that the disease may be recognized at once, then the physician will be able to know when he finds obstruction. There can be no false obstruction; if there is obstruction it is true obstruction or it is not obstruction at all.

Of the symptoms of the disease we have obstipation in contradistinction to constipation, though this is not always true at the beginning of the attack; pain and vomiting are early and constant symptoms. Vomiting occurs at such period in the disease as is indicated by the location of the illeus whether high or low in the canal, meteorism and collapse. Cushing and Bloodgood have studied a number of these cases in regard to post operative leukocytosis and finds that 10,000 to 12,000 to be usually the count.

In every case of bowel affection with pain and vomiting suspect obstruction and make yourself sure that this disease may with safety be eliminated before you diagnose some other disease.

Lobinger says the treatment of true intestinal obstruction is immediately and at all times surgical. In order that any operative measures shall prove effectual it should be done promptly. Late operative interference due to late diagnosis or to procrastination is the principle cause of mortality. Erdman says: Rectal enemas in the first few hours are not productive of harm, but may, though rarely, be followed by reduction."

"A surgeon should be called in the very inception of the difficulty and valuable time should not be wasted with harmful and depressing catharsis. A preliminary gastric lavage will do much to quiet and rest the patient when vomiting is an early and depressing symptom."

If the patient is seen reasonably early before serious necrobiotic changes occur in the gut, simple relief of the constricting band or whatever will often suffice. If later there naturally will be conditions and problems of serious nature to be considered by the operator.

Review of Southern Medical Literature.

Southern Medicine and Surgery, October, 1905.

Appendectomy in Pus Cases.—Dr. John A. Gaines says that Dr. Howard A. Kelly advises positively against the procedure except quoting "When the appendix is clearly exposed or when it lies at some point where it can be reached without risk of opening the peritoneal cavity." After giving encouraging results by the method of simple drainage he states "The balance sheet, however, may be said to be overwhelmingly in favor of drainage without exterpation where the latter course presents any serious difficulty or exposes the patient to the dangers of opening the free peritoneum." Dr. A. J. Ochsner in speaking of abscess cases says "All unnecessary manipulations were avoided. In case of circumscribed abscess the appendix was removed when it seemed as though it could be accomplished safely." In support of the method advocated in this paper the author quotes from Dr. John B. Deaver's recent text-book on appendicitis "The abscess should be opened by breaking through the layer of exudate that forms its outer wall or through the outer layer of the mesocolon. The abscess cavity should be wiped out with dry gauze. The appendix should then be located and removed."

Personally the author is convinced that the rational course is to remove the appen-

dix, gaining freedom from future attacks. He has had an experience of some thirty operations without a fatality in cases in which was either circumscribed abscess or ruptured abscess cavities or appendices with pus free in the peritoneal cavity.

The three classes of cases in which a radical procedure may not be advisable are: First, in very young children; second, in very stout patients with tense, thick abdominal walls; third, in very old debilitated cases.

The advantages of the radical method are: First, the nidus of infection is removed, allowing a speedy healing of the wound; second, the patient makes a complete recovery without secondary operation and without recurrences, avoiding the usual long period of bad health; third, complications, as secondary abscess formation left unobserved and femoral phlebitis liver and kidney infection are materially lessened; fourth, fecal fistula will be less frequent and when present will heal earlier; fifth, will have a smaller death rate; sixth, the usual occupation can be resumed much earlier and digestive disturbances are much less frequent.

Stricture.—Dr. Robt. C. Byran after giving a thorough account of this condition and its complications in the male calls attention to the same condition in the female. When one recalls that the female urethra is prolific with follicles and is highly vascular; that it is the essential seat of gonorrheal invasion; is frequently injured by local applications, vaginal irrigations and traumata and is damaged to a more or less extent in every childbirth the occurrence, development and pathologic growth of an organic stricture is seemingly easy to explain. Unlike the male the site by preference is first at or near the meatus and second the neck of the bladder.

In long standing gonorrheal urethritis with its chronic and soiling discharge the dysuria pollakiuria and nervous phenomena forces the patient to surgical aid. Pressure emits a mucopurulent discharge and it feels like a thickened artery. The meatus looks swollen, red and carunculous and on questioning the history of an irregular stream and past urinal dribbling can nearly always be elicited.

In selected cases of dysuria and frequent urination the condition of stricture should always be borne in mind as a possible cause of the trouble, remembering, however, that it is a stricture of large calibre and not the small which gives rise to the most annoying and untractable subjective symptoms.

The American Practitioner and News.

Ventro Suspensions and Fixation of Uterus.—Dr. Chas. W. Hibbitt assumes that when he is called on to treat retroversions and prolapse of the uterus by suspending or fixing the uterus to the abdominal wall that the simpler methods have been tried and have failed. The conditions are the result of a lacerated pelvic floor, a relaxed outlet or increased weight from above.

Alexander's operation of shortening the round ligaments commends itself in retroversion where there are no adhesions whatever and the woman has not passed the child bearing period. In addition the operator must remember to retrench or repair the perineum to make it complete. Another method where the abdomen has been opened to fix or suspend the uterus and it is found necessary to remove diseased tubes and ovaries, then by their removal the broad ligament is shortened to such an extent that probably it has brought the uterus up to nearly normal posture and nothing else is necessary to sustain it there than the repair of the perineum. Therefore, the contraindications for Alexander's operation become the indications for a suspension or fixation.

The advantage to be gained by doing a fixation or suspension is that it permits the inspection of the peritoneal cavity, the treatment of diseased appendages, the breaking up of adhesions and bringing the uterus forward in a position which is likely to give relief. One disadvantage is that the operation is not free from the danger of a loop of the intestine becoming entangled with the suture or the new ligaments holding the uterus.

In numerous cases where a fixation had been done the fundus had become firmly adherent to the abdominal wall and the result was some interference with gestation and labor. If, however, a suspension had been done most likely there would have been no interference whatsoever. At the present time it is generally believed that ventro suspension in connection with perineal repair is the only justifiable procedure during the child bearing period. However, in women past the menopause where the uterus has not undergone involution or atrophy, and the retroversion and prolapse remains and their occupation is such that keeps them on their feet a great deal of the time then ventro fixation is indicated.

Southern Clinic, October, 1905.

Typhoid Fever in Small Towns and Rural Communities.—By Dr. A. H. Foreman, Storke, Ala.

The Medical Recorder, October. 1905.

Practical Value of Litten's Diaphragm Phenomenon in Diagnosis.—Dr. Nettie Klein calls attention to this phenomenon as used in diagnosis and as taught by Dr. R. C. Cabot at Harvard Medical College. De-

scribed as follows: The patient lies upon his back with chest bared and feet pointed directly toward the window. Cross lights may be altogether excluded by darkening any other windows which the room may contain. The observer stands at the patients side and asks him to take a full breath. As the ribs rise with the movement of respiration a short, narrow shadow moves down along the axilla from about the seventh to about the ninth or tenth rib. During expiration the shadow rises again to the point from which it started, but is less easily seen. This phenomenon is to be seen on both sides of the chest and sometimes in the epegastrium. In normal chests the excursion of the shadow is about two and one-half inches. At the end of expiration the diaphragm lies flat against the thorax from its attachment up to the sixth rib. During inspiration it "peels" as it descends and allows the edge of the lung to come down into the chink between the diaphragm and the thorax. This peeling off of the diaphragm and the descent of the lung during inspiration give rise to the moving shadow above described.

In pneumonia pleuritic affusion and emphysema the diaphragm is held off from the chest wall so that its movements communicate no shadow. In pleuritic adhesions the movements of the diaphragm are prevented. In early phthisis the excursion of the diaphragm is diminished on the affected side owing to loss of elasticity in the affected lung. Fluid or solid tumors below the diaphragm unless very large do not prevent the descent of that muscle and so do not abolish the shadow. In cases in which the diagnosis is in doubt between fluid in the pleural cavity and an enlargement of the liver upward or a subdiaphragmatic abscess the preservation of Litten's phenomenon in the latter two affections may be of great value in diagnosis.

Memphis Medical Monthly, October, 1905.

Electricity in Medicine—Some Results.—Dr. W. S. Lawrence says it is scarcely necessary to mention the accurate and definite results obtained from X Ray examinations of surgical conditions of the bones, and yet there are more cases of fracture and disloca tion treated without this aid to diagnosis than with it. Nothing can be more accurate, scientific and satisfactory than first examining the part with the fluoroscope, second, readjusting the bones if necessary under the fluoroscope, third, an examination after the dressing is put on to see that correct position is maintained, and, fourth, two radiographs taken in different planes shown to the patient if thought advisable and put away for reference. Beck states in a paper on Collis' fracture, "complete and correct diagnosis could not as a rule be made before Rontgen's great discovery. It can safely be maintained that in most cases the radiograph has revealed conditions that were not expected and that required the original diagnosis to be more or less modified."

A differential diagnosis by means of the fluoroscope or radiograph can be made between ostitis, tuberculosis or syphilis on the one hand and upon the other any lesion that may impair the usefulness of the joint. Periostitis and ostiomyelitis are quite well marked and abscesses can be localized. Empyema and tuberculosis may be detected. In some cases the restricted movements of the diaphragm, which can be clearly seen, are of great diagnostic importance.

Electrical diagnosis is not confined to X-Ray phenomena. The principles of electrical resistance and the facts of nerve and muscle irratability to the various electrical stimuli are also made use of.

At the international congresss called at Berlin to celebrate the tenth anniversary of Rontgen's discovery Dr. Lassar, of Berlin, read a paper reporting 100 cases of epitheleoma treated by the X-Ray, with a cure effected in 97 cases. Dr. Comas, of Lisbon, reported 60 cases with about the same percentage of cures. This treatment may, therefore, be regarded as nearly a specific. The same may be said of Lupus Vulgaris.

Persistent and intractable cases of acne may readily be cured by appropriate doses of the X Ray.

Less than a dozen seances will generally clear up the most persistent cases of psoriasis, though relapses are frequent. Blastonycetes may be cured by this means where drugs are usually unavailing. There are many reliable reports of cures of many cases of mycosis fungoides when the tumors invaded the entire surface of the body and when the disease was of several years standing. Barbers itch can be cured by irradation after all other methods have failed.

The author says Dr. Seun told him that of five cases he had then under treatment of Hodgkins disease all were doing well; that he had seen within the past two months two cases of tubercular peritonitis cured by the X-Ray; also that hundreds of cases of tuberculosis of the skin and tubercular adenitis have undoubtedly been cured. Why not tuberculosis of the lungs?

Galvanism is recommended in removing warts, moles, birth-marks, superfluous hair and all facial blemishes; also in strictures, chronic gonorrhoea and some forms of prostatis in Trachoma and various gynaecological conditions.

The static induced current made to make and break by the prime conductors with the abdominal electrode attached to positive

pole in mild forms of constipation while a rectal electrode is also attached in the more chronic forms to cause contraction of the bowel wall as well as the walls of the abdomen and intestine above.

New Orleans Medical and Surgical Journal, October, 1905.

The Relation of Pleurisy to Tuberculosis.—Dr. Silvino Von Ruck says that formerly the pleural cavities were regarded as exceedingly well protected against localization of bacteria not only because of the protection afforded by the chest wall but because the lymphatic system of the lungs during the movements of the chest in breathing was supposed to carry centripetally away from the pleura everything otherwise liable to reach it.

Arnold showed by experiments on animals that soot inhaled into the lung was deposited in the pleura. While these corpuscular elements or bacteria may readily enter the pleura from the lympathics of the lungs the latter, at least, may gain access from the cervical and supraclavicular glands, although these glands are in reality regional glands of the costal pleura. That metastatic processes may occur in a direction to that of the lymph current has been shown by Recklinghausen, and this fact Grober applies in the relation of cervical glandlaur tuberculosis to pleurisy. Grober points out that when the cervical glands become the seat of tubercle they swell, thereby causing lymph stasis and retrogressive flow so that eventually the efferent vessels become afferent, carrying lymph and with it tubercle bacilli from the cervical glands.

Clinical observations of pleurisy following tonsilitis, diphtheria and phlegmanous inflammation of the structures of the oro and naso pharynx would indicate the existance of a direct path from these regions to the pleura, and this Grober has demonstrated experimentally, showing that corpusular substances when injected into the tonsils are transported by the lymphatics along the trachea in the course of the great vessels to the peritracteal substerual and mediastineal nodes and the pleural apices.

There are various other paths by which corpuscular substances as well as bacteria may reach the pleura, as, for instance, from the abdomen by upward extension through the diaphragm by extension from mediastineal glands, etc.

The author concludes the article by the following statements:

1. The pleural cavities are readily accessible to bacterial invasion.

2. The great majority of pleurisies with effusion which occur in otherwise healthy individuals are due to infection with the tubercle bacillus. This is proven by autopsy findings by methods of exact diagnosis and by subsequent clinical histories of the majority of persons who have been the subject of such attacks.

3. There is ample evidence to indicate that the so-called idiopathic dry pleurisies are likewise usually tuberculous.

4. The subjective symptoms of inflammation of the pleural apices often simulate those of myalgia and rheumatism.

5. In every case of pleurisy or of persistent pain in the chest or shoulder which can not be satisfactorily ascribed to other causes tuberculosis should be suspected and a careful physical examination should be instituted to determine, if possible, the existence of a tuberculous process in the lungs or elsewhere.

6. Even if physical examination in such cases proves negative the patient should be regarded as tuberculous until the contrary is proven and should at least be kept under prolonged observation and re-examined from time to time.

The tuberculin test may be relied upon to confirm or exclude tuberculous nature of pleurisy in case of doubt.

8. The application of these principles will often lead to an earlier recognition of tuberculous diseases of the lungs and sent to an institution of treatment at a period which will in many cases secure to the patient most important advantages in his prospects for recovery.

Virginia Medical Semi-Monthly, October 7, 1905.

Principles of Surgery, Lecture XI.—Varieties of Inflammation Classification (a) By Cause—Microbic (b) By Degree—Acute—Sub-acute—Chronic (c) By Product—Transudate—Exudate (d) By Tissue—Vascular—Non-Vascular—Appendicitis: When to Operate.—Dr. J. B. Catlitt after quoting from the various authorities on the subject says that immediate operation is called for in cases of ordinary severity with sharply defined symptoms.

(a) When there is a tumor present in ileo-carcal region. (b) Whenever there is a sudden or progressive increase in the gravity of the symptoms. (c) When after 36 to 48 hours the case does not show any tendency to improvement, but the condition remains the same. (d) Whenever there is any doubt as to the existing condition and the patients' improvement most authorities advise immediate operation. As to the handling of patients previous to turning them over to the surgeon internal medication does not cure. When you have to delay operation until a surgeon arrives do not mask the symptoms with opiates, but try and localize by rest, ice bag and starvation.

Nashville Journal of Medicine and Surgery, October, 1905.

Feeding of Infants.—By Dr. J. A. Har-

din, Sweetwater, Tenn.

Maryland Medical Journal, October, 1905.

A New View of Sleep.—By Dr. A K. Bond, Baltimore, Md.

Gaillard's Southern Medicine, October, 1905.

The Responsibilities of Railway Surgery. Dr. C. A. Julian believes there is no department of surgery which calls for a better conception, a readier knowledge, a cooler head, a quicker decision or a steadier hand than does that of railway surgery. The entire subsequent history of every case of injury is controlled by the first dressing. The surgical infections, which twenty-five years ago were the dread of all operators, have disappeared, and it has been amply demonstrated that it is very much better to exclude germs than to permit of their access and then endeavor to destroy them after they have been implanted. Injuries from what at first may seem to be irreparable may recover, especially those of the extremities, therefore one should wait and allow plenty of time to elapse before heroic measures are undertaken. As a rule the patients are those who are entirely dependent upon their hands for their sustenance, and the injured member should be restored to a normal condition, or as nearly as possible, thereby saving many from being lifelong cripples, and in addition to this saving of vast sums to the corporations.

The workmen should be taught what to do in accidents. Classes should be formed and the proper instruction given. Medical boxes containing sensible and aseptic material for making first aid dressings should be placed in every car. These boxes should be wisely distributed and the employes instructed in an intelligent use of them. It is the duty of the railway surgeon to be qualified not only to take charge of injuries but to prevent disease; to lay down rules for the good of all; to encourage proper ventilation; to instruct in the proper disinfection of coaches and stations; to inspect the heating and the water supply; and to instruct in regard to sleeping car furnishings and bedding; and above all to encourage laws against the production of filth and the intolerable habit of careless spitting. This it would seem would constitute a long list of duties, but the principles of hygiene and sanitation are very easy to learn and proper instruction could be given to those whose duty it would be to carry out this great problem.

Finally, it is the duty of every railroad surgeon to see that the very best men, mentally and physically, should be employed in railway service, men whose minds are healthy and well balanced, who have normal brains free from disease.

The Mobile Medical and Surgical Journal, October, 1905.

Treatment of Corneal Ulcers by the Practitioner.—Dr. C. P. Jones says treatment should be both preventitive and therapeutic. Every injury of the cornea should be assumed to be infected. The eye should be promptly irrigated with a saturated solution of boracic acid or bichloride of mercury solution one to four thousand, and kept as nearly aseptic as is possible to so do by use of a bichloride and salt ointment containing bichloride of mercury one-fifth grain and sodium chloride one grain to one ounce of vaseline. If pain is a factor add four grains of cocaine, allowing the druggist to use a small quantity of albolene to better enable the cocaine to dissolve. If the injury is as much as twelve hours old and the proper antiseptic precautions have not been taken touch the wound with tincture of iodine, applied with a few shreds of cotton wound round a small probe. All applications to the cornea being painful a previous installation of a six per cent. solution of cocaine should be made.

When the ulcer has declared itself first curette with a small size Meyhoefer's corneal curette, then touch with tincture of iodine. If after twenty-four hours there is no marked improvement cauterization either with carbolic acid after the same manner as the application of iodine or the actual cautery should be thoroughly done. For the latter the suitable instrument being Gruening's cautery probe. These two instruments are very inexpensive and should be in the office of every country doctor. Atropine sulphate one per cent. should be instilled every four hours for the first day, thence twice a day. Hot applications—boric acid a teaspoonful to a pint of water as hot as can be borne every hour, bathing the eye for ten minutes at a time, is very beneficial. A shade or smoked glass may be worn to shield the eye from light. The cauterization may be repeated in two or three days if necessary, often one application suffices. In bad cases, and especially highly nervous patients, rest in bed in a dark room and a nutritious diet is imperative. Pain is usually relieved by the application of the vaseline and cocaine ointment before mentioned. This can be augmented by codeine by the mouth or hypodermically. The curette is highly important, as it removes tissue which would otherwise slough away were it not used, therefore causing no more scar than would otherwise result. Then, too, by its removal of the detrites the iodine and other antiseptics are enabled to have a clear field of action.

The Southern Practitioner, October, 1905.

Twenty Years Experience with Atypica

Duodenal Ulcers.—By Dr. W. J. Miller, Johnson City.

Atlanta Journal-Record of Medicine, October, 1905.

Etiology and Prevention of Perineal Lacerations with Special Reference to Shoulders.—By Dr. Archibald Smith, Atlanta.

The Virginia Medical Semi-Monthly, October 27th, 1905.

Case of Death from Peritonitis due to Gonorrhea.—Dr. Alvah Stone reports this case, stating that the patient had treated himself and the druggist for six weeks, before the doctor saw the case. The author believes the gonorrhoea infection passed through the vesicular semilunaries into the peritoneal cavity and set up the general peritonitis.

Some Practical Points in X-Ray Therapy.—Dr. A. L. Grey believes that the X-Ray is now thought to be as definite in its effects upon living tissue as is heat or cold, and its effects may be as well regulated if only it be measured to the same degree of exactness. If this be true, and the theory is not disputed by many, as in the case of those agents above mentioned entirely opposite effects may be produced by varying the mode as well as the intensity of the application. Heat, when applied in moderate degrees, acts as a stimulant, increasing cell growth, but when applied to the degree present in the thermo-cautery it acts as a destroying agent and produces death of the cells and sloughing. In many of the cases seen in advanced age the tissues offer such low resisting powers that the invading element, be what it may, finds little difficulty in spreading to the adjacent structures, deeply infiltrating them with the process of disease. In such case the insufficient administration of light, which loses to a degree its destructive effects in passing through the superficial tissues, acts only as a stimulant on the disease producing factor, and an increase in the rapidity of the growth will be the result. In such cases treatment should be begun with energy, and penetrating prolonged exposures should be given at frequent intervals in order to speedily produce the desired destructive action on the disease producing element. Another cause of failure in these old cases may be the inability of the tissues to repair when a destructive effect has been produced, and the sloughing process proceeds under direful influence of pyogenic bacteria.

The author concludes by saying that we have in X Ray a definite therapeutic agent capable of working good or evil as it is scientifically or unskillfully used, and as we cannot expect to produce the same effect from the local application of luke warm water that we observe after the application in the same manner of boiling water or similar results to follow the hypodermic injection of a one hundredth of a grain of strychnine and one grain, just so we cannot expect to produce the same results wite a small dose of X-Rays as will be produchd with a large one, but as illustrated by the short superficial doses necessary for psoriasis and the long deep doses for deep seated cancer the dose must be regulated according to the nature, extent and location of the disease.

The day is not far distant when X-Ray will be accurately measured and certain definite doses administered for the production of certain definite affects.

The Texas Medical News, October, 1905.

Some Modern Methods of the Management of Tuberculosis of the Lungs.—By Dr. H. N. Graves, Georgetown, Texas

Book Notices.

Hare's Therapeutics. A Text-book of Practical Therapeutics, with Especial Reference to the Application of Remedial Measures to Disease and their Employment upon a Rational Basis. By Hobart Amory Hare, M. D., B.Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, Physician to the Jefferson Hospital, etc. New (11th) edition, enlarged and thoroughly revised to accord with the eighth decennial revision of the U. S. Pharmacopœia, 1905. In one octavo volume of 910 pages, with 113 engravings and four colored plates. Cloth, $4.00, net; leather, $5.00, net; half morocco, $5.50, net. Lea Brothers & Co., Philadelphia and New York, 1905.

Dr. Hare possesses the invaluable faculty of intuitively discriminating between the important and the unimportant, between the practical and the impractical. This is what every physician and student most desires to learn, and everyone also wishes to be spared the labor of sifting for himself. It is not surprising that the writings of an author who tells his readers what they want to know, and who puts facts directly and simply, should be in great demand. Hare's Therapeutics, for example, has come to its eleventh edition in fifteen years. What this means may be gathered from the fact that each edition has had to be put to press several times to satisfy requirements. Such rapidity of sale has enabled the author to keep his book always abreast of the times, a most important matter in so progressive a subject as Therapeutics. In the new edition just at hand it has been thoroughly revised to accord with the new U. S. Pharmacopœia.

The volume is divided into two main sections, the first dealing with drugs, remedial measures and foods for the sick, and the second with applied therapeutics, or the use of drugs in the treatment of disease. Each section is arranged alphabetically to facilitate reference, and the two are closely cross-referenced, so that complete information on any point is easily found. There are two indexes, one of Drugs and the other of Diseases and Remedies. The latter is annotated, and thus affords at a glance a suggestive list for selection of the most appropriate agent according to the indications of the case. It would be difficult to conceive of a work answering the needs of students and practitioners better than this, either in plan or execution.

A Treatise on Diagnostic Methods of Examination. By Prof. Dr. H. Sahli, of Bern. Edited, with additions, by Francis P. Kinnicutt, M. D., Professor of Clinical Medicine, Columbia University, N. Y.; and Nath'l Bowditch Potter, M. D., Visiting Physician to the City Hospital and to the French Hospital; and Consulting Physician to the Manhattan State Hospital, N. Y. Philadelphia and London: W. B. Saunders & Company, 1905. Octavo of 1008 pages, profusely illustrated. Cloth, $6.50 net; Half Morocco, $7.50 net.

We have been anxiously awaiting the publication of Dr. Sahli's great work in English. Its immediate success in Germany will certainly be repeated in this country, and the English-speaking profession owe to Messrs. W. B. Saunders & Company a debt of gratitude for their enterprise. Not only does the distinguished professor exhaustively consider all methods of examination for the purpose of diagnosis, but the explanations of clinical phenomena are given and discussed from physiologic as well as pathologic points of view, and with a thoroughness never before attempted in any clinical work. The examinations of the stomach, sputum, feces, urine, and blood are exhaustively treated. There is an article from the pen of Dr. Theodore C. Janeway giving a brief review of the investigations of American and English observers upon the value of the clinical estimation of blood-pressure, with a description of some newly devised instruments. Some of the new features in the chapter on urine examination are: Seliwanow's reaction for levulose, Bial's test for pentoses, and quantitative determination of urochrome after Klemperer. Osmotic pressure and cryoscopy of the urine are also discussed at length, and a description is given of Liebermann and Posner's method of staining urinary pigments. In the chemical examination much attention is directed to describing methods; and this is done so exactly that it is possible for the clinician to work according to these directions. The nervous system has been very elaborately detailed, giving unusual space to electrical examination. Indeed, the American edition of this great work contains all the material of the new fourth German edition, with which it simultaneously appeared. Many new illustrations have been added by the editors. The work is indispensible to the practitioner.

A Treatise on Diseases of the Skin. For the use of advanced Students and Practitioners. By Henry W. Stelwagon, M. D., Ph. D., Professor of Dermatology, Jefferson Medical College, Philadelphia; and Clinical Professor of Dermatology, Woman's Medical College, Philadelphia. Fourth Edition, Revised. Handsome octavo of 1135 pages, with 258 text-illustrations, and 32 full-page lithographic and half-tone plates. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $6.00 net; Sheep or Half Morocco, $7.00 net.

Four large editions of Dr. Stelwagon's work have been required in three years. Surely such a sale bespeaks a book of unusual merit. Notwithstanding the frequency of editions, Dr. Stelwagon has not lost this opportunity to bring his book up to the latest knowledge. The therapeutic use of the Rontgen rays, high-frequency current, and Finsen light have been accorded the increased attention their growing importance deserves. We notice the addition of new text-cuts, some thirty-eight in number, and six additional insert plates, all up to the high standard set by the text. The author, by the judicious elimination of redundant material, has kept the size of his book much as before, the increase being only some twenty pages. Indeed, it is remarkable the epigrammatic way that Dr. Stelwagon has of saying things—a style most desirable both in a text-book and a reference work for the busy practitioner.

Anatomy and Physiology for Nurses. By LeRoy Lewis, M. D., Surgeon to and Lecturer on Anatomy and Physiology for Nurses at the Lewis Hospital, Bay City, Michigan. 12mo of 312 pages, with 100 illustrations. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $1.75 net.

Dr. Lewis has based the plan and scope of his excellent little work for nurses on the methods he employs in teaching these subjects. His object was to deal with anatomy and physiology that the student, while grasping the primary principles, would at the same time lay a broad foundation for a wider study. The text, therefore, is simple and comprehensive. It would not be just if in giving our unstinted praise to this

work we neglected to mention the illustrations. Evidently, Dr. Lewis is thoroughly familiar with the needs of the trained nurse along these lines. Every illustration selected, and a number of them are in colors, has been chosen for a definite purpose, which it admirably fulfills. For a work of its size it contains an immense amount of information, and just the kind desired, presented in the right way.

A Manual of Diseases of Infants and Children. By John Ruhrah, M. D., Clinical Professor of Diseases of Children, College of Physicians and Surgeons, Baltimore. 12mo volume of 404 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Company, 1905. Flexible leather, $2.00 net.

Dr. Ruhrah is to be congratulated upon the production of a manual that presents the subject of pediatrics in such a clear yet concise manner. He has outlined the therapeutics of infancy and childhood in a way that cannot fail to make for this work a place of first importance in its field. He has given explicit instructions for dosage and prescribing, and a number of useful prescriptions are appended. Infant feeding is given in detail. All the illustrations are practical, and include three inserts. A very valuable feature consists in the many references to pediatric literature so selected as to be easily accessible by the student, enabling him to ascertain the sum of knowledge on any given disease. We give Dr. Ruhrah's work our unqualified recommendation.

A Text-Book of Physiology: for Medical Students and Physicians. By William H. Howell, Ph. D., M. D., LL. D., Professor of Physiology, Johns Hopkins University, Baltimore. Octavo volume of 905 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth $4.00 net; Half Morocco, $5.00 net.

Dr. Howell's many years of experience as a teacher of physiology in several of the leading medical schools is evident throughout the entire work in the simple and clear style and in the practical handling of his subject. The author has laid main emphasis upon those facts and views which will be directly helpful in the study of general pathology and in the practical branches of medicine. At the same time, however, we are gratified to see that Dr. Howell has not ignored the experimental side of the subject. This we consider very important, for it has been through individual research that all the great advances in physiologic knowledge have been made. The entire literature of physiology has been thoroughly digested and the important views and conclusions incorporated. Indeed, the author has prepared a text-book which, while preserving the scientific spirit, is at the same time simple and modern in presentation. Every notable advance in physics or chemistry as influencing physiology has been carefully noted. Illustrations have been most freely used, greatly helping in understanding and supplementing the descriptions in the text. Especially valuable are those illustrations employed to make clear the more intricate anatomic and physiologic mechanisms. Altogether, we consider it a very valuable book, because it is accurate, up to date, and highly practical.

Operative Surgery. For Students and Practitioners. By John J McGrath, M. D., Professor of Surgical Anatomy and Operative Surgery at the New York Post-Graduate Medical School, Surgeon to the Harlem, Post-Graduate, and Columbus Hospital, New York. Second Edition. Thoroughly revised, with 265 illustrations, including many full-page plates in colors and half-tone. Philadelphia: F. A. Davis Company, Publishers, 1905. Price, Extra Cloth, $4.50, Half Morocco, $5 50.

In this volume the author has combined in a practical manner the subjects of practical anatomy and operative surgery, because the knowledge of one is essential to the proper study of the other. Diagnostic illustrations have been used because these are the most satisfactory for teaching. He has excluded all anatomical considerations that are purely technical and not of practical value in the performance of surgical operations. In accordance with the plan followed in the author's courses in operative surgery in the course of the Medical School of New York.

Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By Professor Dr. Carl Von Noorden, Physician in Chief to the City Hospital, Frankfort, A. M. Authorized American Translation. Edited by Boardman Reed, M. D., Late Professor of Diseases of the Gastro-Intestinal Tract, Hygiene and Climatology, Department of Medicine, Temple College; and Physician to the Samitarian Hospital, Philadelphia; Physician to the American Oncologic Hospital, etc. Translated by Florence Buchanon, D. SC., and I Walker Hall, M. D. Part VII, Diabetes Mellitus, its Pathological Chemistry and Treatment. Lectures delivered in the University and Bellevue Hospital Medical College, New York Herter Lectureship Foundation. New York: E. B. Treat & Company, 1905. Price $1.50.

The medical profession has again been placed under obligations to Professor Carl Von Noorden. The addition of this thorough-going treatise on diabetes to his series

of monographs will prove a boon to a large class of patients, and should be welcomed by the physicians of all lands. Those who read English are to be congratulated upon the publication of this new and original work in the English language. The old-fashioned routine treatment of diabetes by merely restricting according to a fixed formula, the carbohydrates of the diet, or attempting to exclude them altogether, leaving the patient to make up the deficiency by eating mainly of proteids, ad libitum was most insufficient and unsatisfactory. The administration of opium or other active drugs and the giving of alkalies or alkaline waters without a frequent and thorough examination of the urine for much more than a determination of the amounts of sugar and albumin present, have brought equally unfortunate results in most cases. Dr. Von Noorden uniting in himself, as only a few others do, a thorough knowledge of physiology, physiologic chemistry and pathology with a remarkable genius for organizing and energetically carrying out original investigations, especially in the most interesting field of diseases involving disturbances of metabolism, and an enormous clinical experience gained among patients studied in public and private hospitals and sanitariums under conditions of scientific exactness rarely attained, is prequalified to acquaint us with the latest discoveries and conclusions concerning the origin, complications and dangers of diabetes, as well as to tell us of the most successful methods of avoiding and curing the disease when a cure is possible. A perusal not only of this monograph, but also of the previous volumes of the series, must awaken in the mind of the thoughtful practitioner a feeling of satisfaction that the chasm between pathology and clinical medicine, between the workers in the laboratory and those at the bedside, is being bridged, and the practice of medicine being more and more established upon a solid scientific basis.

Neurotic Disorders of Childhood, including a study of Auto and Intestinal Intoxications, Chronic Anaema, Fever, Eclampsia, Epilepsy, Migraine, Chorea, Hysteria, Asthmas, Etc. By B. K. Rachford, M. D., Professor of Diseases of Children, Medical College of Ohio, University of Cincinnati. Pediatrist to the Cincinnati, Good Samaritan and Jewish Hospitals. Member of American Pediatric Society, Association of American Physicians, Etc. New York: E. B. Treat & Company, 241-243 West 23rd Street, 1905. Price $2.75.

The author in 1893 and 1894 published a series of papers in the Archives of Pediatrics entitled, "Some Physiological Factors of the Neuroses of Childhood." In these papers he studied the physiological peculiarities of the immature nervous systems of infants and children and noted the all important bearing which these peculiarities had in producing and in giving individuality to the neuroses of childhood. It is a well known fact that infants and children are especially predisposed to serious and complicated nervous disorders, and that this class of diseases has been very little understood by the general practitioner, and has in fact not been a matter of study by neurologists. For these reasons the author decided to revise the papers previously published and make them the nucleus of a book on the neurotic disorders of childhood.

Part I. of this book contains these revised papers with the addition of chapters on "Gastro-Intestinal Toxaemia," "Auto-Intoxications," and "Chronic Systemic Bacterial Toxaemias." Part II. of this book deals with the individual neuroses. Here the author made a careful study and presented the etiology, symptomatology, and treatment of these diseases that the student of medicine and the general practitioner will not only be able to better comprehend these common and little understood diseases, but will also be able to apply successful lines of treatment.

The book is neatly bound and contains 440 pages and is carefully indexed. All those who are interested in this line of study should add the book to their library.

Transactions of the Medical Society of the State of New York for the Year 1905. Published by the Society.

The transactions of 1905 made by this society make a volume of 450 pages. It is well gotten up in an attractive, substantial volume. It contains many beautiful illustrations made by men internationally known in the medical profession. Dr. Joseph D. Bryant of New York is president and Dr. Frederick C. Curtis of Albany is secretary.

Literary Notices.

In the American Monthly Review of Reviews for November, the most prominent topics of discussion are,—the independent tendency in American politics, as illustrated in Mr. Jerome's fight for re-election in New York and in other local campaigns in various parts of the country; the question of insurance management; the meeting of Russia's first parliament, the Duma, and the method of its election; the lessons in sanitation taught us by Japan's recent war experience; the movement for church federation in America and England; the contribution made by Jews to our national life (apropos of the two-hundred-and-fiftieth anniversary of the landing of the first Jews in America); the present condi-

tion of rural Ireland, and the workings of the new land law; and the provision for sports and games in the park play-grounds of our great cities.

STORIES OF POPULAR SPORTS. The November Lippincott's contains three stories on popular sports: Football is represented by Ralph Henry Barbour in his Yale-Harvard tale called "The Dub;" Fencing, by Fred Gilbert Blakeslee, in "The Broken Foil;" Racing, in a steeple-chase sketch, by Alfred Stoddart, entitled "Over the Jumps." All three embody the sporting spirit artistically and effectively, besides making good reading. The November Lippincott's will particularly please college men.

Abstracts of the Leading Articles of the Month.

Artificial Rupture of the Membranes.

Gibb (Scot. Med. and Surg. Jour.) advises the rupture of the membranes early in that condition known as hydramnios as otherwise the labor is apt to be exceedingly tardy. In no class of cases is this maneuver more valuable than in primiparae, where the head lies from the commencement very low in the pelvis, almost on the perineum, where the os is but slightly expanded and where the cervix is much thinned out and the forewaters are scanty. Another class of cases where the artificial rupture of the membranes is of value is where the uterine contractions are deranged by concealed internal hemorrhage. Where there is a sausage-shaped bulging of the membranes through a narrow os, rupture the membranes at once. In multiparae where the head lies high up, the cervix is not thinned out, and the membranes do not become sufficiently tense, rupture the membranes.

The "Coin-Percussion Sound" in Pneumothorax.

Langwill (Scottish Medical and Surgical Journal) states that the ordinary method adopted to obtain the "bell" sound in pneumothorax is open to fallacy. When two coins are "chinked" together upon a patient's chest at a distance of only a few inches from the ear of the ausculator, a ringing sound more or less present external to the chest wall, even when no pneumothorax is present, is conducted to the stethoscope along the parietes. But if instead of using the coins the chest wall be "flicked" by the finger and thumb while the physician auscultates, it will be found that the "flick" or "fillip," which is heard through the stethoscope over the normal chest as a dull thud, is at once converted into a ringing or chiming sound whenever the pneumothorax area is reached. The alteration in note is much more striking over the affected area than it is when the coins are used, since there is then not a mere difference in the intensity but in the character of the sound. What was a dull or flat note over other parts of the chest becomes musical (ringing and bell-like) over the area of the pneumothorax.

Case of Epileptiform Attacks Complicated by Double Ovarian Tumour.

Russell in the Glasgow Medical Journal notes that many and diverse complaints have been from time to time associated with epilepsy. The woman, aged thirty-one, had, in October, 1899, a typical epileptic attack. Similar attacks began about three years ago—1896—and continued to recur at the time of the menstrual period for a year. Till 1899 she had been free from attacks. In November, 1899, just before the menstrual period, she had two fits, despite the fact that she had been dieted and put on bromides continuously. In 1903 she had had but a few fits, and was in good health. In May she had an acute attack diagnosed as peritonitis and abdominal tumour, torsion of whose pedicle was the probable cause of the peritonitis. In June the tumour was observed to be rapidly increasing, and in July a large ovarian tumour on the left side was removed, together with a small tumour in the right ovary. Recovery was uninterrupted, and since the operation the patient has resumed work as a mental attendant, without any recurrence of the epileptiform attacks.

Acute Septic Colitis.

Vincent (British Med. Jour.) reports a case of this affection due to contaminated milk supply. The patient complained of cervical adenitis and jaundice followed with pains in the abdomen; these latter were of a paroxysmal and shifting character. It was necessary to administer morphin sulphate, gr. ½, hypodermically to give the patient any relief. In fact pain was the only thing complained of, and that was misleading owing to its shifting nature, leading the writer at one time to suspect renal colic, which was soon dispelled for biliary colic, and the history of repeated attacks of jaundice seemed to confirm this latter diagnosis.

Bowels were slightly constipated and gave no clew to the condition until a few days before death. The symptoms of toxemic absorption—absence of high fever, presence of increasing rapidity of the pulse, enlargement of the liver and spleen—were present.

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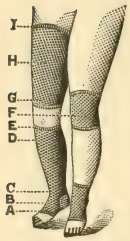

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The Closure of Abdominal Wounds and Hernial Apertures with Buried Metallic Plates.

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The attention of our readers is called to the advertisement of Robinson-Pettet Company, which appears on page xviii of this issue.

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Operative Treatment of Myoma during Pregnancy.

Frank (British Gynecological Journal) reports seven personal observations, and concludes that operative interference is indicated: (1) During pregnancy, if the tumor is growing rapidly; if the circulation and breathing are disturbed; if there is reason to suppose that myoma may lead to a premature interruption of the pregnancy; if symptoms of peritonitis or incarceration appear due to the tumor; or if the myoma is a polypous one, or proceeds from the vaginal portion of the uterus (danger of disturbed nutrition).

Recent Work in Obstetrics.

Fothergill, in the London Practitioner, states that the most interesting recent work has to deal with intervention during the first stage of labor. They include methods of opening or dilating the cervix, or of gaining access to the uterine cavity without dilatation. Of 82 Cesarean sections, 20 were performed for eclampsia, placenta previa, cancer of the cervix, threatened rupture of the uterus, or accidental hemorrhage. The various devices for opening the uterus have been tabulated by Williams chronologically as follows: 1. Dilatation of the cervix by the hand in the form of a cone; 2. The mechanical devices of Oslander, Busch, and others; 3. Champetier de Ribes balloon and other bags; 4. Deep cervical incisions, whether multiple incisions, or vaginal Cesarean section; 5. Bossi's and other dilators; 6. Harris' method of manual dilatation; 7. Bimanual methods of dilatation advocated by Edgar and Bonnaire. Of these the third, fifth, and sixth are the most in use. Williams thinks the Harris method of dilatation even more rapid than the method with the powerful Bossi dilator. The vaginal Cesarean section is preferred by Duhrssen to any form of dilatation, as it gives access at once to the uterine cavity and the fetus. It has been performed more than a hundred times, and is a comparatively safe operation. Its indications are: 1. Cancer of the cervix during pregnancy, the operation being followed by vaginal hysterectomy; 2. Abnormal conditions of the cervix and lower uterine segment, such as rigidity, fibroma, stenosis, or incarceration; 3. Dangerous heart, lung, or renal conditions of the mother; 4. The evident fact that the death of the mother is imminent. It may replace the classical Cesarean section in eclampsia and all conditions in which the soft parts obstruct labor seriously.

Gonorrhoea in Children.

Still (The London Practitioner) quotes Kimball as stating that there is in infants a remarkable predisposition to infection with the gonococcus. In the newly-born the mother is the normal source of infection, but in older children the source is not obvious. Among 600 admissions to the Babies' Hospital in New York in one year, there were seventy ceses of vulvo-vaginitis and ten cases of arthritis due to the gonococcus. Infection reappeared in spite of preventive measures, and the spread of the disease was only checked by isolation. Kimball reports eight cases in which pyæmia resulted from gonorrhœal infection in infants under three months. In six of these there was purulent polyarthritis; in two cases the knee only was involved; vaginitis and urethritis was absent, and ophthalmia only occurred in one case, after the joint affection. The gonococcus was found in the joints in each case. Six of the infants died, four during the acute stage and two from marasmus. The source of infection was attributed to gonorrhœal stomatitis, and gonococci were found in the trachea in one case. Kimball found protargol (2 to 5 per cent.) the best drug for antiseptic douching of the vulvitis. Northrup describes two cases of peritonitis in two sisters aged nine and eleven, which originated from gonococcal vaginitis. According to Galvagno, the mortality from gonorrhœal peritonitis in children is 20 per cent.

Pott's Disease in Children.

Gorochoff (Prakt. Vrach) draws the following conclusions: (1) Tuberculous spondylitis is pre-eminently a disease of the young child. (2) The greatest number of cases is found between the ages of two and eight years. (3) In his hospital experience the author met a greater number of girls than of boys, the number of the former being almost double that of the latter. (4) The duration of the disease before admission to the hospital was between a few weeks and one year. (5) In the presence of undoubted predisdosition whether because of

heredity or on account of surrounding conditions of life measles and at times trauma may serve as the starting point of the disease. The complication of spondylitis by measles shows itself very rapidly in deterioration of the patient's condition. (6) The lumps were mostly found in the thoracic portion of the spine; the lower thoracic vertebræ were usually the most affected, and the curvature was generally limited either to these vertebræ or to the upper lumbar. (7) With the evacuation of the abscesses followed by filling up of the cavities with a ten per cent. solution of iodoform emulsion, or after a curettage done with the same aim in view followed by a hermetic closure of the opened abscess, satisfactory improvement would be observed in those localities where the skin has not grown too thin. (8) Cases of active surgical interference and further treatment with drainage also showed a considerable degree of improvement, though the most frequent postoperative complication was usually a febrile condition. (9) Correct methodical extension and counterextension in bed often, in combination with suspension with the Sayre apparatus, is to be considered as the best means in the majority of cases, of checking the development of the tuberculous process and of creating favorable conditions for the further treatment with corsets. (10) Besides the specific treatment it is absolutely necessary that resort be had to favorable climatic surroundings, as in special sanatoria at seashore or on the mountains, but never at a hospital. (11) Out of six who died four were found to have suffered from pulmonary tuberculosis, and two had in addition fatty degeneration of the heart.

The Therapeutic Value of Relaxing Climates.

Williams (Edinburgh Medical Journal) says that the change from the polluted air of the large towns and cities to the purer air of the country is always good, but more attention should be paid to the other climatic factors, moisture, sunshine and exposure, which present wide divergences in many places, though all of these can lay claim to an equal atmospheric purity. In most instances, if anything beyond atmospheric purity is considered at all, it is that combination of conditions to which the adjective "bracing" is applied. He succeeds in demonstrating that this may be one of the worst of all climatic prescriptions, well enough for people in moderately good health, but apt to act as an irritant in abnormal states. A bracing climate is characterized by extremes, and its physiological effect is one of stimulation. Sufferers from chronic pulmonary, renal, cardiac or nervous disease, demand a sedative rather than a stimulating regime, and for this purpose, what the author of this paper calls a relaxing climate is more suitable. The meteorological factors which combine to produce a typical example of such a climate are, moderate, if any elevation, moderate exposure to the winds, full exposure to the sun, and a high humidity with its consequent equability of temperature. It is claimed that such a climate, despite its disagreeable effects on the healthy, is possessed of a much wider therapeutic range than that whose subjective effects are agreeable. These indications are ably considered in the author's article and it would pay most every one to read them. Madeira and the Canary Isles, and a number of places in England and France are suggested as localities where the proper conditions are available, but undoubtedly there are also numerous resorts on our own continent which would fiulfill the same indications. He fitly concludes that the relaxing climates have been unduly neglected, their unattractive exteriors have obscured their inner worth and the time has seemed ripe for a plea in favor of a truer and fuller estimate of their therapeutic powers.

A Case of Rapid Paraplegia.

Hamilton in The Liverpool Medical Journal mentions the case of a man of forty-one, who had a slight fall from his bievele on August 27. The trifling nature of the mishap is evidenced by the fact that he walked twenty miles the same day after the accident. He remained quite well until the night of October 27, when he complained of having contracted a "chill." Yet he was strong enough to travel to London; but, not feeling well, he returned to Liverpool October 30. Hamilton saw him the same evening. He stated that he was a little out of sorts, but walked about the room. Apparently he had some intestinal catarrh, with a cold. Some grey powder was ordered. Next day he had an even temprature of 101, and the same on the following day: he was not ill but was ordered to stay in bed. He improved the next two days, and his temprature was normal; his tongue was clear, and he was fit for work. At 4 p. m. the same afternoon, while talking jocularly, he found he had suddenly lost the use of his legs. Before he could be got to bed he was completely paralyzed from the waist downwards. He was seen by the writer the same afternoon, who found complete motor paralysis and complete loss of sensation from the level of the ninth dorsal nerve downwards. There was no line of hyperaesthesia; the line of sensory appreciation, a little above the umbilicus, was very well marked. Plantar, patellar, and cremasteric reflexes were absent. In the evening the temperature was 101 degrees; there was much headache, and severe pain in the back was complained of. The abdomen was distended from intestinal paralysis, and there was retention of urine. On

the morning of November 5 he was better, and the urine (drawn off) was found to contain neither sugar nor albumin. But on the same afternoon the loss of sensation had extended upwards to the level of the spine of the scapula, but had not much increased in front. At midnight he suddenly became unconscious, and the respirations had increased. Next morning the breathing was entirely diaphragmatic. His face was turned to the left, and there was varying deviation of the eyes to the left. He could not swallow, and nearly choked when he tried to swallow a little water. On November 7 both arms were paralyzed right facial paralysis was now observed, but it completely disappeared on fresh administration of oxygen, as did also the deviation of the eyes. He died on November 9, four and a half days after the first appearance of paraplegia.

From the first the diagnosis was that of haemorrhage. It was difficult to locate the lesion, but it was obvious that it was most probably seated in the lumbo-sacral region. Whether it was extra or intramedullary it was not easy to say. Clearly it was not Landry's paralysis, as the paralysis was from the first both sensory and motor.

The author believes that the accident had nothing to do with the malady. As he observes, the high temprature and feverishness pointed to a septic organ, but the feverishness had entirely disappeared before the paraplegia occurred.

Post-mortem the lesion was found to be intramedullary hemorrhage most pronounced at the level of the ninth dorsal nerve. Here the cord was almost entirely destroyed by the haemorrhage, which extended downwards to the level of the third lumbar vertebra and upwards to that of the mid-cervical region. There was no evidence that the disease was of bacterial origin.

The Cause of Pain in Cases of Gastric Ulcer, and its Bearing on the Operation of Gastro-Jejunostomy.

Moullin (London Medical Lancet) says that the walls of the stomach have no sensory nerves, and may be cut, crushed or bursted, without exciting the slightest feeling. Gastric ulcer sometimes develops without pain until rupture. What, then, causes the intese pain of other cases of gastric ulcer and of dyspepsia? Pain in these cases comes on as soon as food enters the stomach, increases with digestion, and subsides as the stomach empties itself into the bowels, or ceases after vomiting. He says the cause in the movements of the stomach dragging on the sensory nerves in the parietal peritoneum, especially when this is inflamed by extension from the ulcer along the lympaties. These sensory nerves are derived from the intercostals and are distributed in the subserious tissues. This is indicated by the fact that during operation the least drag upon this has immediate effect upon the heart and respiration. The painless gastric ulcer is nearly always situated on the anterior surface far from this parietal peritoneum. Those situated along the curvature and near the pylorus are worst; sometimes even the contractions of the pylorus are the cause. In one case no ulcer was found, but simple section of the strong band of fibers just behind the pylorus seemed to effect a cure. This is the practical bearing: The operation of gastro-jejunostomy aims to drain the stomach and give it a rest. For this purpose, when there is a choice the opening should be made at the cardiac end, to give the more muscular and more active pyloric end rest; or if near the pylorus, the circular fibres should be freely divided, so that they can't work. The weight of the bowels will make the point chosen the most dependent. Adhesions to the parietal peritoneum should be divided to prevent dragging.

An Unusual Case of Pseudo-Hypertrophic Muscular Paralysis.

Foggie (Scottish Medical and Surgical Journal) describes a case of this disease. The patient first came under observation in September, 1899, being then 16 years of age, when the diagnosis was made of pseudo-hypertrophic paralysis. There was no family history of any similar condition. The patient was apparently healthy at birth, and walked quite early. When he was five or six years old, some stiffness was noticed in the right leg, but no attention was paid to it. He had scarlet fever at nine years, and this seems to have hastened the muscular changes. Since then he has been noticed to be slow in going up stairs and to repuire to help himself by putting his hands on his thighs. When he first came under observation, the gait was already markedly effected. His feet were kept well apart, while there was a tendeney to throw back the shoulders and upper part of the body and to arch forward the small of the back. The gait was waddling in character, and when he tried to run, the head fell forward into the shoulders. He could rise from the ground, but only by spreading out his legs and climbing up the thighs in the usual characteristic fashion. He had then a bright, healthy appearance; his body was well developed, and his height was in keeping with his age. Muscular development was obviously affected. The calves were hypertrophied and firm, but the other muscles affected were atrophied. The thigh muscles were wasted and soft. The pectorals were wasted in the lower halves. The latissimi dorsi were absent. The biceps and triceps on each arm were wasted in contrast to the firm and apparently unaffected muscles of the forearms and hands. Muscular power was very weak, especially in the flexors and extensors of the hips and knees. The muscles of the upper arms and shoulders were very weak. The knee-jerks were absent. The plantar reflex was present and of a flexor type. The face and tongue were not involved. He was seen at various times, but there was no change until July, 1901, when he was noticed to be drawing up the right heel. Walking was becoming more difficult throughout the year 1902, and by August he had finally gone off his feet.

Since then there has been distinct wasting of the calf muscles although they still look large. In October, 1902, scoliosis was distinct in the lower dorsal and lumbar regions. By August, 1903, he was practically unable to rise. The tongue was noticed in August, 1901, to be distinctly enlarged. From then till now it has been steadily increasing in size. It is firm and swollen, and even at times hangs from the mouth. It can be moved fairly freely. In October, 1902, and still more in December, the open mouth, the loss of facial expression, and the thickening of the lower lip began to attract attention. These have increased a little of late. The lower lip is not impeded in its movement in any way. Enlargement of the tongue is rare in this disease. It is the peculiar honor of Erb to have correlated in a broad fasion all the different types of muscular atrophy of purely muscular origin, showing that they present certain fundamental points of agreement, and including them all under one name, viz., progressive muscular dystrophy. The case here recorded, commencing as a typical pseudo-hypertrophic muscular paralysis, and going on into the type with facial involvements, is an additional argument in favor of his view.

Diagnosis of Gastric Carcinoma.

Rolleston, in the London Practitioner, summarises two papers which have recently appeared on this subject. Arnell, in a paper based on the examination of 40 cases, discusses the question whether any of the modern gastric methods furnish us with the means of making an early diagnosis of gastric carcinoma. While admitting that the association of a persistent absence of hydrochloric acid, the presence of lactic acid, Oppler-Boas bacilli, yeast, and retained food, with a tumour and cachexia, in the vast majority of cases means carcinoma, and even in the absence of a palpable tumour, this diagnosis would be justifiable, he insists that the positive diagnosis of a case in its early stage is absolutely impossible. He finds that a persistent absence of free hydrochloric acid from the stomach contents is more constant in, and characteristic of, pernicious anaemia than of carcinoma of the stomach, and that in a small percentage of undoubted cases of gastric carcinoma of the stomach, and that in a small percentage of undoubted cases ofgastric carcinoma, there is a fair amount of free hydro chloric acid. Laboratory methods alone will not, therefore, lead to a correct diagnosis; the medical man must take a broad view of the case from the point of view of physical examination, plus assistance from laboratory examinations. Mouisset and Tolot have investigated the question of the diagnosis of gastric carcinoma from the point of view of the enaemia, leucocytosis and the differential leucocyte count. They have found that a diminution in the number of erythrocytes has a definite relation to the constitutional condition; and appears when the bodily nutrition is maintained, and appears when the cachexia appears. The fall of the corpuscular haemoglobin value is an important sign of gastric cancer. Mouisset pointed out in 1891 that this fact was of use in distinguishing this disease of the stomach from hepatic cirrhosis, gastric ulcer or catarrh, and, of course, from pernicious anaemia. This fall may be absent in the early stages of the disease, or when sudden alterations occur in the number of erythrocytes. Leucocytosis, when not due to inflammationary complication, is generally a late event in the course of the disease, and only occurs when cachexia has come on. The diffential leucocyte count, which has been thought to show a mononuclear increase by Hayem, a polymorphonuclear increase (Strauss and Rosentien), or a mononuclear in the early stages, followed in the late stages by a polymorphonuclear increase, did not appear to the authors to justify any conclusions on the diagnosis of gastric carcinoma.

Dressings.

Lockwood (Indian Medical Gazette) says that the essential qualities in dressings are dryness. Use plain sterilized gauze, double cyanide gauze, iodoform gauze, and alembroth. For many aseptic plain sterilized gauze is now being used. Double cyanide gauze and wool are used for a proportion of aseptic cases, as well as for the septic. For some of the latter iodoform gauze is used. But, as regards the various dressings, I cannot detect any difference in the healing of the wounds provided a layer of silver foil is put next to the skin. If silver foil is not at hand, I should perfer to use plain sterilized gauze and a layer of plain sterilized wool.

This layer of silver foil is supposed to retard the growth of the skin bacteria, next, it helps to exclude air infection; and, lastly, it separates the antiseptic dressing, if such a one be used, from the wound. It is exceedingly hard to trace the line of a wound which has been covered with silver foil because the skin edges are entirely devoid of redness.

The original Listerian dressing was completed with an outside dressing, which consisted of a layer of waterproof jaconet and eight layers of gauze. The purpose of this outside dressing need not be referred to, but there can be no question but that it has of late fallen into disuse. At some nursing homes I have been told that I am the only surgeon who uses an outside dressing. Now, it may be conceded that the dryness of the aseptic wounds have done away with one of the main objects of the outside dressing. Moreover, a large layer of impervious jaconet may be hot and uncomfortable, and, by preventing evaporation, be calculated to favor the collection of perspiration and the growth of skin bacteria. But in some cases these disadvantages are far outweighed by some very solid advantages. For instance, the triangular scrotal dressing which I first described to this Society in 1896 is not only comfortable but likewise secure, and since its use a suppurating scrotal wound has been almost unknown. It is true that this result has been attained with the aid of systematic drainage, but that would be risky unless an outside dressing was used to prevent

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Stillingia Root	4 Grains
Poke Root	1 Grain
Cinchona Red Bark	2 Grains
Iodide of Potassium	4 Grains

Solvent: Alcohol, 10 and ½ minims to each fluid drachm; glycerine; syrup; water.

Ayer's Malaria and Ague Cure

Each Fluid Ounce Represents

Quinia	8 Grains
Cinnamon	8 Grains
Jamaica Ginger	8 Grains
Cloves	4 Grains
Peppermint	8 Grains
Orange-peel	12 Grains

Ayer's Cherry Pectoral

(Revised Formula)

Each Fluid Ounce Represents

Wild Cherry	6 Grains
Grindelia Robusta	4 Grains
White Pine	4 Grains
Senega	4 Grains
Terpin Hydrate	4 Grains
Blood Root	2 Grains
Rio Ipecac	2 Grains
Citric Acid	2 Grains
Heroin	1-8 Grain

Solvent: Alcohol, 10 minims to each fluid drachm; glycerine; syrup; water.

Ayer's Pills

Each Pill Contains

Podophyllin	1-8 Grain
Jalapin	1-8 Grain
Aloin	1-12 Grain
Oil Peppermint	1-24 Grain
Oil Spearmint	1-24 Grain
Capsicum	1-24 Grain
Ginger	1-4 Grain

And why shouldn't we publish the formulas of our medicines! We have nothing to conceal. No secrets to hide. Come to Lowell any day. We will gladly take you all through our Laboratory. Even there, we do not have one single secret to hide.

NORWOOD'S TINCTURE OF VERATRUM VIRIDE

The old and well-known therapeutic agent is now manufactured by

The Shakers' Medical Department at Mount Lebanon, Columbia County, N.Y.,

according to the original method of W.C. Norwood, M.D. For many years this pharmaceutical preparation has acquired a reputation attained by few articles in the entire Materia Medica. There is scarcely a disease that has not felt its power and yielded to its power. **Mania, Cancer Puerperal Fever, Puerperal Eclampsia,** and **Convulsions** from other causes, **Epilepsy, Chorea, Acute and Chronic Pneumonia, Orchitis, Asthenia Phthisis Pulmonalis,** and so many other morbid conditions of inflammatory, nervous and other origin, that an attemp to enumerate we believe to be entirely unnecessary—the medical profession throughout the world being so familiar with its therapeutical effects.

See Letter from Surgeon-General;

In reply to your letter dated November 8th, 1900, with enclosure from Robert Halford, Agent, dated Mount Lebanon, N. Y., October 6, 1900, and stating that you had sent by express two samples for "Veratrum Viride," I have to state that they were sent to Washington Barracks, D.C., for trial and found to be of excellent quality.

(Signed) GEO. M. STERNBERG, Surgeon General' U. S. Army.

MANUFACTURED BY

The Shakers' Society of Mount Lebanon, N. Y.,

R. HALFORD, Agent.

☞ you can depend on getting most satisfactory results

the escaping blood from becoming infected from the exterior. In the radical cure of hernia, especially inguinal, it is difficult to prevent the exposure of the wound and I should despair of doing so without the aid of a very well-fitted and securely-fixed outside dressing. It would be easy to adduce a number of inguinal and scrotal wounds in which the outside dressing had prevented the wound from being soaked with urine.

After laparotomy another danger has to be guarded against. Owing to the anaesthetic and the nature of the operation vomiting is a frequent complication. During vomiting the contractions of the abdominal muscles are extraordinarily violent, and special precautions are needed to prevent the access of air to the wound, and hence an accurately fitted and fastened outside dressing becomes a wise precaution. In hot weather it can, if necessary, be easily dispensed with after the first forty-eight hours. But nowadays it is unusual to hear any complaints of discomfort, and the skin is hardly ever found reddened much less blistered. For similar reasons an outside dressing is of use in amputations of the breast and about the root of the neck. During vomiting, coughing, and breathing there is a strong probability of the entrance of air into the wound unless special precautions in the shape of an outside dressing be taken. Those which I use are all cut to pattern and carefully fitted and fastened with straps and buckles. They are afterwards secured with bandages which are sewn on or reinforced with strapping.

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EUCALYPTOL.

(EUCALYPTI EXTRACT.)

The sole product in existence extracted from the leaves, the curative constituent of the plant.

Honored by the distinguished patronage of His Majesty, the King of Italy as per decree dated March 14, 1878; proved by the medical division of the Prussian Government to be of perfectly pure origin, reported March 2, 1878. This distinction is unique proof of the unapproachable superiority and excellence of "Sander & Sons' Eucalyptol."

This preparation counteracts the inflammatory process of parasitic invasion. Unsurpassed in the cure of typhoid and all other infectious fevers. The remedy par excellence in throat troubles, influenza, diarrhœa, dysentery, wounds, etc.

We recommend to carry a bottle for immediate service; the range of application of this remedial agent is well nigh unlimited, and the physician who is anxious for progress in the realm of victory is sure to meet always with most happy results. Therefore, why rely on risky methods, endangering name and reputation when there is ready at hand a preparation that affords absolute protection against discomfiture and failure?

Our agents—the Meyer Bros. Drug Company, St. Louis, Mo.—will forward one original package (one ounce) on receipt of one dollar.

SANDER & SONS,
Bendigo, Australia.

Remarks on Digitalis Treatment.

Under this title a comprehensive article by F. Schwyzer, M. D., (New York), appears in the Medical News, Nov. 18th. After discussing the disadvantages of the usual galemicals of digitalis the author considers it glucosides, and then refers to the desideratum in digitalis medication as follows:

We must have the active principle of digitalis as one chemical body which must be constant in composition and effect. It must contain all the valuable properties of the fresh leaves. We need this pure principle as a standard, we must be able to note our experiences from a standard measure in our histories, even if, afterward, we can treat our cases with our empirical doses of the powder. We should be able to buy digitalis leaves of a known strength after samples of the powder have been analyzed for a percentage of pure principle. The pure isolated principle should be "injectable" and non-irritating. All of these requirements seem to be fulfilled in a new product, the soluble digitoxine, published by Dr. M. Cloetta, Professor of Pharmacology at the University of Zurich. A number of authors like Naunyn and Kottman (Munchener medicinische Wochenschrift, No. 31, page 1413, 1904), Senator and Bibergiel (Berliner klinische Wochenschrift, No. 51, 1904), and Klemperer (Therapie der Gegenwart, 1904), make favorable reports of their experience with this digitoxine. Dr. Cloetta sent me a supply large enough for an extensive test and my results were good. I tried it under almost any condition in which digitalis is indicated; in all sorts of muscular insufficiencies of the heart, in chronic valvular troubles, in arteriosclerotic heart disturbances and in nephritis, also in acute diseases like pneumonia, typhoid fever, etc. I got the desired digitalis effect several times by injecting digitoxine into the muscles of patients who had already been given powdered digitalis, or fluid extracts per os, without any other result than that of nausea.

I found Cloetta's digitoxine superior to the digitaline and other digitoxines which are in the market. It can be used wherever digitalis is indicated. Per os it acts much more quickly than the powder, hypodermically (deep into the muscles) in a few hours, intravenously at once. It is not cumulative and its effect is not as lasting as that obtained from the powder. But the effect once reached, can be kept by continued small doses. Its chief advantage is that it can be given hypodermically without much pain and without danger of infection, and that, in emergency, it can be injected into the veins with almost instant effect. The single dose of Cloetta's digitoxine is one-third milligram, corresponding to 0.1 digitalis. The dose can be given three times a day or oftener per os or as an injection. In emergency, for instance, in acute dilatation of the heart I have given two-thirds milligram by injection three times a day for several days in succession until the danger was passed.

Bronchiline.

There have been but few specifics discovered for any disease that flesh is heir to. No one in this day expects such a thing. It is equally true that a few standard remedies furnish nearly all that we have that can be safely used. Bronchiline is a compound elegantly put up, carefully harmonized and one of the few tried and well known remedies for all ailments of the bronchial tract or of the lungs. The formula is furnished with each bottle. Full particulars upon application. Peter-Neat-Richardson Co., Louisville, Ky.

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Dioxogen

H_2O_2 3%

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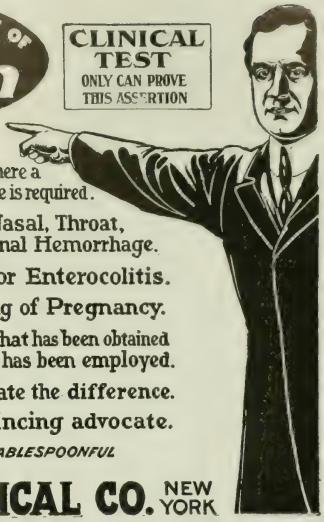

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USE DIOXOGEN as a Hemostatic in Nasal, Throat, Stomach, Intestinal, Rectal, or Utero-Vaginal Hemorrhage.

USE DIOXOGEN in acute Gastritis or Enterocolitis.

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COMPARE, DOCTOR, the results with what has been obtained when peroxide of hydrogen or other remedy has been employed.

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ISAAC M. TAYLOR, M. D.

The recent enlargement, and consequent increase in number of patients, has made necessary the employment of an Assistant Resident Physician, who has entered upon his service. We purpose paying especial attention to the treatment of Drug Habits, and the permanent care of patients of both sexes, with chronic mental diseases of mild type. Other improvements are in prospect which will be announced when our plans are matured.

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Specially Equipped for the Treatment of Gynecological and Surgical Cases.

GEO. W. PRESSLY, M. D., Surgeon.

EDW'D C. REGISTER, M. D., Physician.

For further information address the Superintendent, St. Peter's Hospital.

Miscellaneous.

Johann Hoff's Malt Extract.

Eisner and Mendelson Company have on the market a malt extract with iron called Johann Hoff's Malt Extract. The Johann Hoff Malt Extract has for years been recognized as one of the best finished products and entirely free from noxious ingredients and adulterations. Many of the malt extracts which have been on the market have been adulterated with large quantities of glucose. It contains almost two per cent. of alcohol, the diastase is rendered inert by strong alcoholis solutions, so that the two per cent. present is in no way an impediment to the action of the diastase. The addition of iron to this preparation increases greatly the efficacy of this most valuable therapeutic agent. No doubt all are familiar with the results obtained by the use of malt in all chronic and sub-acute ailments and in convalescence from protracted fevers. In all these conditions which also include tuberculosis, caries, chronic abscess, neurasthenia, scrofulous diathesis and typhoid fever one has the general constitutional disturbance as well as an impoverished blood condition to combat. It is in these cases that iron is demanded, and yet often one experiences the greatest difficulty in prescribing the iron in such a manner as not to irritate the stomach and allow the absorption of the much needed iron for the deficient hemoglobin of the red blood corpuscles. By combining the malt with the iron this difficulty is overcome, for the malt acting as a mildly stimulating stomachic and containing the ferment diastase both stimulates the cells of the mucous membrane and digests any excess of farinaceous food which is taken, thus assisting the assimilation and the absorption of the iron.

The protieds contained in the malt are, during the process of malting, changed into peptones and parapeptones, hence predigesting them and in this way assisting in the digestion of protieds as well as the starches.

A diet consisting of a very high percentage of starches will, if continued, produce a starchy indigestion. This may be seen also in those cases where an acute or chronic disease of the mucous membrane of the mouth which is due to accumulated fermenting material present, this producing a highly acid condition which immediately destroys the ptyalin of the saliva and thus the starches pass on to the stomach in the crude state, although the starch is acted on by the pancreatic juice in the intestine it often happens that this is not sufficient and the starch like all other foods taken into the body which are not properly digested act as foreign bodies, ferment and undergo decomposition and produce by products which are absorbed and act as ptomaines on the entire system.

By the predigested protieds and the action of the diastase and stimulation the gastric mucous membrane, malt is well known as one of the best muscle and fat producers in our present pharmacopeia. The iron in Johann Hoff's Malt Extract is in the form of the neutral peptonates of manganese and iron, thus rendering the deleterious action of the iron on the teeth inert. Each wineglassful contains one gramme of the peptonates of manganese and iron. The constipating effect of iron preparations is entirely obviated by this preparation. Cases of anemia and chlorosis are almost invariably troubled with constipation in varying degrees and when iron is given in these cases it is always necessary to give a purgative to obviate both the present condition of constipation and the constipating effect of the iron. This preparation of malt is well borne by the most delicate stomach, which is one of the most essential points in favor of this preparation over other preparations used for this purpose. Many of the preparations of malt at present on the market are so constructed that it is almost impossible to give them to children on account of their taste. This could not be attributed to Johann Hoff's Extract, as this has been one of the main objects of its manufacturers to produce a palatable as well as a perfect product. With nursing mothers the physician is often confronted by the following circumstances: The mother has not enough milk for the child as shown by the marasmic condition of the child. From past experience with children who have had to be placed on artificial prepared foods or modified cows milk the physician will endeavor to exhaust all the means in his power to increase the mother's milk rather than depend on any other method of feeding. Beer is often recommended. Following these directions the mother obtains a case of ordinary light beer and uses it according to directions. This will usually increase the amount of milk, but the milk instead of containing the proper amount of solid nutriment necessary for the development of the child contains too much water and thus the child goes on losing weight and strength. Therefore, in these cases where it is essential that more milk is required Johann Hoff's Extract of Malt with Iron is indicated because it contains protieds in a predigested state and diastase which will correct any starchy indigestion which may be present and will increase the assimilation of all food the mother takes, and also contains the most assimilable form of iron, which will in-

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In all conditions of

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The True Hepatic Stimulant and Eliminant

Sulpho-Lythin

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restores normal functional activity of the Hepatic Cells. ¶ It does not irritate or otherwise act injuriously under continued administration. ¶ It corrects Acid Intoxication by overcoming its cause.

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I am well acquainted with many of the virtues of Sulpho-Lythin. I have used, personally, six bottles with marked relief for sluggish liver that had taxed my strength and the ingenuity of my medical friends for four years. I frequently prescribe it with benefit in eye, nose and throat cases.

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URISEPTIN

URISEPTIN TREATMENT is SUCCESSFUL TREATMENT.

Liberates formaldehyde in the kidneys.
Makes alkaline urine acid.
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Clears turbid urine by killing bacteria.
Keeps the urinary tract aseptic.

Therefore Indicated in CYSTITIS, PYELITIS, NEPHRITIS, PROSTATITIS, BACTERIURIA, GOUT and RHEUMATISM.

DOSE—Tablespoonful night and morning in plenty of hot water.

Full information furnished physicians on request, or 8-oz. bottle will be sent on receipt of 25 cents.

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Nasal, Throat
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"Imitations are at best poor substitutes and I never use them I want the results that invariably follow the use of Glyco-Thymoline—genuine." Sole Agents for Great Britain:

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Our surgical clinics and dispensaries furnish in the space of a few weeks opportunities for studying a great variety of injuries and surgical diseases. Students receive individual instruction in the treatment of all minor injuries, the diagnosis and treatment of fractures, the application of bandages, splints and plaster casts, and in aseptic and antiseptic methods of wounds treatment. The clinical instruction may be further supplemented by courses in general and special operative surgery on the cadaver, under the personal supervision of experienced teachers.

A new three months' course in Diseases of the Eye will begin January 1st, 1906.

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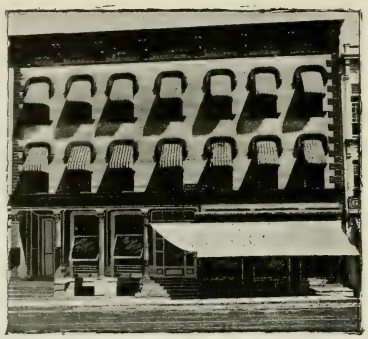

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crease the hemoglobin of the blood and in time bring the mother's health up to a point that she can naturally produce not only the required amount for the child but also the exact quality necessary.

In chronic disease, such as tuberculosis, where certain drugs are indicated that are irritants to the stomach and which are put up in various ways to overcome this difficulty, is too often discarded and the patient allowed to abstain from them until the stomach can overcome this irritability. This loss of time when the pathological process is going on demanding possibly more food than the patient was able to digest when in good health means a great loss and this is the stage when you see the loss in weight, the anemia and loss of strength rapidly develops. There is always a certain amount of anemia in these cases caused by the disease. This anemia in turn lessens the vitality of all the tissues and thus a vicious circle is completed. The anemia in consumption is probably more serious than in most of the other chronic diseases, for usually the lungs are so crippled that they cannot properly oxygenate the blood, even if the hemoglobin was normal and much less so when the hemoglobin is deficient.

The present treatment of consumption recommended is fresh air, good food and exercise and drugs as indicated. The object of these measures is then to bring the digestion of the food up to normal so that all the tissues and the blood may be in such a condition as to best combat this disease. Therefore, when treating a tubercular case, especially those cases which do not seem to digest the oils and fats well, if a combination of the oils and malt extract and iron such as that prepared by Eisner and Mendelson Company under the name of Johann Hoff's Malt Extract with iron the difficulty of irritable stomachs and lack of proper absorption and assimilation will to a large extent be overcome.

Nutrivine.

One of the most difficult things that the doctor has to contend with is to procure a reliable article of Cod Liver Oil. In Nutrivine, prepared by the Peter-Neat-Richardson Co., Louisville, Ky., will be found an example of a properly prepared medicine of this character. It contains the properties of the best Norwegian Cod Liver Oil, without its nauseous and offensive taste.

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HIGHSMITH HOSPITAL

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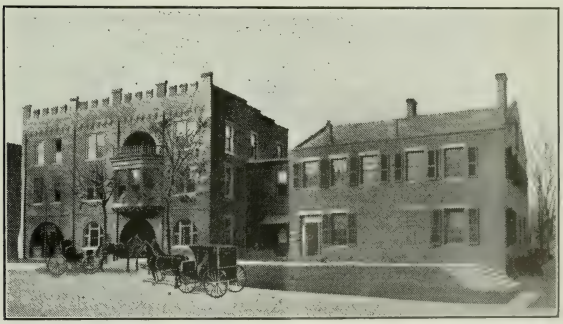

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Nurses Home and Training School attached; also,

Cochran annex, complete in furnishing and equipment, with endowed beds for both races.

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Cough.

It is not always an easy matter to decide upon the cause of a cough, and, therefore, sometimes a difficult matter to relieve or cure it. Many patients go about their work, appear in excellent health, and ye' suffer more or less from a persistent irritating cough. Examination of the chest in these cases does not show anything abnormal in the respiratory murmur. Examination of the throat often reveals an elongated uvula which is frequently cured by a simple astringent gargle, and the cough disappears. Again, examination reveals congestion of the vocal cords, and a soothing inhalation of a teaspoonful of compound tincture of benzoin in a teacup of hot water frequently causes the cough to be relieved in a short tim'. But the general practitioner, especially during the winter or spring, meets with a great many cases of cough, the cause of which he cannot fathom. He calls it an irritating cough, but the cause of the irritation is a mystery. Experience will soon show that it is irritating to both the patient and the physician. To the latter because he finds that it continues in spite of his best efforts, and at last the patient drifts from one physician to another without getting relief. Eventually he takes his case in his own hands, and buys from druggists some of the numerous cough remedies they have for sale. Still no relief, and he finds his stomach thoroughly out of order because opium has been a constituent of the quack mixtures he has taken. Nature, the vis medicatrix naturæ, possibly comes to his aid, the cough disappears, but no thanks to his doctor or his own prescribing. This is a brief sketch of what I know occurs to hundreds of physicians, as it certainly has to me. Among the late remedies for this class of cases is heroin, and it certainly has proved a valuable addition to our materia medica. There are many combinations in use of which heroin is the chief constituent. Some, in my opinion, are not to be recommended for ge'ieral use. What is needed is a safe and efficient preparation whose action is positive and definite. Such a combination we have in Glyco-Heroin (Smith), made by Martin H. Smith Co., of New York, to which my attention was drawn about a year ago. Each drachm of this mixture contains heroin, gr. 1-16; ammonia hypophos., hyoscyamus, white pine bark, balsam tolu, glycerine, ad ʒi. The astringent properties of white pine bark are of peculiar service in inflammations of the respiratory tract. It also is of use in arresting the night sweats of phthisis. Balsam of tolu is an aromatic stimulant, useful in chronic bronchitis or in the advanced stage of the acute disease. Altogether this mixture has, in my hands, proved to be of the greatest value, and at least a dozen of my medical friends to whom I have recommended it are loud in its praise. I give below the report of a few out of many cases in which I have used it. I may state that the first case is that of the writer.

Case I.—F. W. C., aged 62 years, general health good. On the 23rd of January, 1901, about 10 p. m., visited one of the worst fires Montreal has had for years; was exposed to great heat for about fifteen minutes, when he left to return home. H d to stand some minutes waiting for an electric car, and found that the body, which had been perspiring freely, began to feel chilly. On reaching home lighted a cigar, but before smoking half of it, was seized with a very severe rigor. Went to bed, and the rigor lasted at least twenty minutes, when it left; no perspiration followed. Passed a restless night, and, in the morning, feeling quite ill, sent for a medical friend, who found my temperature 102 degrees, pulse 100, respiration 28, and evidence of commencing pneumonia in the anterior part of the right lung. It is needless to follow the case minutely. Briefly, the whole anterior portion of the right lung became involved, and the inflammation extended to the hepatic peritoneum. It was a serious condition for a man of 62 years, and for several days the outlook was ominous. But a good constitution, good treatment, and splendid nursing brought about a favorable termination. There, however, remained an irritative spasmodic cough without expectoration, which was most annoying, as it disturbed sleep, and, therefore, retarded convalescence. To relieve this condition a mixture containing a couple of drops of dilute hydrocyanic acid with half a teaspoonful of paregoric was prescribed with but little relief. I then prescribed for myself, changing the mixture several times, getting some relief from day attacks, but at night the cough was bad as ever. Seeing in one of my medical journals an advertisement of Glyco-Heroin (Smith), I sent for a sample to New York, as it was not to be had in any drug store in Montreal. I soon received through the Post Office four ounces, and within forty-eight hours very marked relief ensued, and by the time I had used the four ounces I was almost well. Four ounces more completely cured me. I have kept a bottle of it in my house ever since, and two or three times during the year a threatened return has been promptly relieved by two or three doses of a teaspoonful, which is the proper quantity for an adult.

Case II.—Miss A. P., about 24 years of age, has been a patient of mine all her life. For the last four or five years has every spring been attacked with a spasmodic cough which lasted from two to three months which I failed to relieve. Thinking possibly that there might be trouble in the throat, beyond my view, which might be the cause of the cough, I sent her once to Dr. Birkett, throat specialist. He reported that his examination was negative. The cough as usual continued till the weather became very warm. Last spring she consulted me for the same cough, and told me very candidly that if I failed to relieve her she would try some one else. I prescribed Glyco-Heroin (Smith), four ounces, and before she had finished it she was completely cured. She, so far this spring, has had no occasion to consult me.

Case III.—J. L. F., a physician (specialist), consulted me in August, 1891, for a hoarse spasmodic cough, which was most aggravating both by night and day. He feared whooping cough, as his sister's children, who resided in the same house, were all down with the disease. I prescribed for him four ounces of Glyco-Heroin (Smith). Within a few days he reported to me that he was fifty per cent. better. I think that he repeated the same quantity twice, by which time he was practically cured.

Case IV.—F. I. B., aged about 58 years, an old soldier, now employed as watchman in a safe deposit company. Has been a patient of mine for the last 18 years. Is asthmatic, but the attacks are not frequent. Has had repeated severe attacks of acute bronchitis. In December, 1901, sent for me—diagnosis, acute bronchitis. Bronchial rales all over anterior and posterior chest. Cough severe, expectoration characteristic. Ordered croton oil liniment to chest, front and back, and gave a mixture of vin ipecac, vin antimon., tinct. of aconite, and syrup of squills. For five days this treatment was followed without the slightest improvement to any of the symptoms. I then prescribed Glyco-Heroin. The following day when I made my visit the patient exclaimed on my entering the room: "Doctor, why did you not give me that medicine before? It has given me immense relief." And so it had; the cough was greatly diminished; the expectoration was much less. Before he had finished a second four ounces I allowed him out of bed, for he was practically convalescent.

Case V.—W. McG., aged about 65, consulted me in January, 1902, for a persistent irritative cough which had persisted since October last. He had been under the care of his family physician without relief. I placed him on Glyco-Heroin—a four-ounce mixture cured him perfectly.

I have brief notes of at least a dozen such cases

IN THE TREATMENT OF

ANÆMIA, NEURASTHENIA, BRONCHITIS, INFLUENZA, PULMONARY TUBERCULOSIS, AND WASTING DISEASES OF CHILDHOOD, AND DURING CONVALESCENCE FROM EXHAUSTING DISEASES,

THE PHYSICIAN OF MANY YEARS' EXPERIENCE

KNOWS THAT, TO OBTAIN IMMEDIATE RESULTS, THERE IS NO REMEDY THAT POSSESSES THE POWER TO ALTER DISORDERED FUNCTIONS, LIKE

"Fellows' Syrup of Hypophosphites"

MANY A TEXT-BOOK ON RESPIRATORY DISEASES SPECIFICALLY MENTIONS THIS PREPARATION AS BEING OF STERLING WORTH.

TRY IT, AND PROVE THESE FACTS

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THE success of Fellows Syrup of Hypophosphites has tempted certain persons to offer imitations of it for sale. Mr. Fellows, who has examined samples of several of these imitations, finds that no two of them are identical, and that all of them differ from the original in composition, in freedom from acid reaction, in susceptibility to the effects of oxygen when exposed to light or heat, in the property of retaining the strychnia in solution, and in the medicinal effects.

As these cheap and inefficient substitutes are frequently dispensed instead of the original, physicians are earnestly requested, when prescribing the Syrup, to write "Syr. Hypophos. FELLOWS."

SPECIAL NOTE.—Fellows' Syrup is never sold in bulk, but is dispensed in bottles containing 16 oz.

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THIS institution is designed to afford all medical cases, except *insane* and *contagio* every opportunity far scientific treatment, guided by accurate methods of diagnosis.

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THE HYGEIA, 101 W. Grace Street, RICHMOND, VA.

in which marked relief followed the use of Glyco-Heroin (Smith), but the above will suffice to show that in it we have a most valuable therapeutic agent.

Dr. George Hall, of Point St. Charles, Montreal, whose attention I drew some months ago to this ualuable preparation, sends me the following brief notes regarding its use in his hands:

1. In three cases of tuberculosis, where the cough was very troublesome, especially during the night, ℥i doses of Glyco-Heroin (Smith) was given before retiring. Not only was the sleep better, but the "night sweats" were diminished in severity and the sputum more easily expelled on rising.

2. L. L., æt. 17.—Acute Laryngitis.—Commenced coughing at 11.20 p. m., coughed almost incessantly until 1.20 a. m. (2 hours), ℥i Glyco-Heroin (Smith) given, cough ceased in about ten minutes, and patient slept until 7 a. m. without coughing once in the interval.

3. Two cases of chronic bronchitis, treated with the usual remedies for about four weeks, with little benefit. Glyco-Heroin (Smith) given in ℥i doses every fourth to sixth hour, expectoration was freely established and cough subsided. At the time of writing both cases are apparently cured; in one case one month has elapsed, in the other two months.

4. J. F., æt. 6.—Whooping Cough.—Five drops of Glyco-Heroin (Smith) every third hour relieved the paroxysms; the duration of the latter were shorter and farther apart.

By Francis W. Campbell, M.A., M.D., D.C.L., L.R.C.P., London, Dean and Professor of Medicine, Faculty of Medicine, University of Bishop's College.

Respiratory Affections; Symptoms and their Treatment.

Mathematical precision, it must be admitted, has its place no less in medicine than in its legitimate field in the study of the higher classics. This precision, in the therapeutic sense, applies to the exact dosage of preparations used by the busy practitioner in his every-day experience. How often do we attain proper results from the use of drugs; how often results that are not only improper, but even dangerous? Precision in dosage can only be obtained by constant study on the part of our co-laborer, the pharmaceutical chemist—study embodying experimentation, the comparing of results, re-experimentation, and, finally, the circulation of the decisive product in the hands of the practitioner.

The past few months have afforded me, and no doubt others, opportunities to test the efficacy of the therapeutic qualities of the various remedies vaunted as certain to relieve the harassing symptoms attendant on the diseases produced by the bacillus of that nineteenth-century infant, "La Grippe."

I refer to this epidemic particularly, because it had not manifested itself in such virulent form since the memorable grippe epidemic of 1889. The author of this paper, in the past few months has had occasion to employ the several preparations recommended for the relief of the distressing respiratory symptoms attendant upon "la grippe." These manifestations, from my view-point, have been characterized principally by cough and dyspnea, in other words, "dyspneic cough." Expectorant mixtures, anodyne solutions, together with hypodermic medication, produced in me a disgust; and why? Simply and undeniably for the reason that the ordinary cough mixtures contain the opium preparations in such combinations as to leave a depressing effect, which, especially in cases of the grippe of the "depressing or melancholic" type, enhances the already depressed feeling. Combinations of ex-

pectorants with stimulating ingredients had no less the same effect.

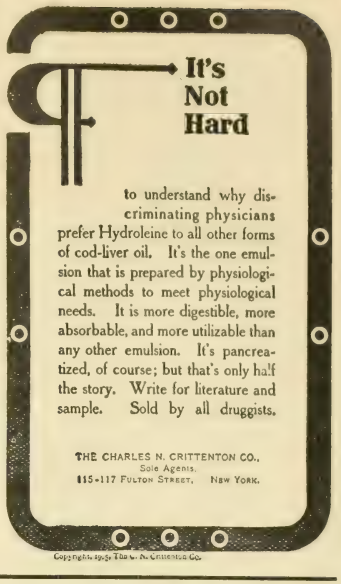
The feelings of the physician are not heightened when his "stand-bys" serve him so poorly; neither are the feelings of the patient calculated to give him increased confidence in his physician. Where lies the fault—in the opium, in the morphine, in the codeine, in the heroin? No, the fault lies in the unstable (or whatever you may call it) combination, or ill-combined ingredients. In seeking for a remedy to relieve the harassing night cough of an attack of "bronchitis due to grippe," in a member of my own family, I chanced to come across a preparation of heroin, which, of all remedies tried, gave relief. I refer to Glyco-heroin (Smith).

Glyco-heroin, in all the cases in which I have used it, has never caused vomiting, an important point for the physician. Is not the stomach the physician's best friend in the treatment of diseases other than obstructive or malignant affections? Another important point noted was that this preparation of heroin—Glyco-heroin (Smith) never played pranks with the structures composing the vasomotor system. Now, what do we, in treating disease, want in addition to a good stomach and a stable nervous attachment? We want rapid action. That I effected through the use of Glyco-heroin.

You cannot produce toxic effects with this preparation, as its effects are lasting, and in most cases do not necessitate the use of the drug at very frequent intervals. Glyco-heroin allays cough, without doubt better than any remedy I have used this winter. And that without the sometimes disastrous results of other preparations of the papaver group. Respiration is stimulated, not in number, but in the depth of the inspiratory act; thus full and complete oxygenation takes place, an important adjunct to the helpful effects of drugs in general, and saving the patient that expensive tank of oxygen. Given full and complete oxygenation, all other symptoms must accordingly diminish; thus temperature and pulse-rate are reduced to a normal condition. Elimination of noxious products not being interfered with the excretion of urine is brought to the normal under the use of Glyco-heroin. It is well known that diminished quantity of urine follows as a result of inflammatory diseases of the respiratory tract; thus the standard quantity of urine is enhanced by the indicious use of Glyco-heroin. In the case of tuberculosis it acts not only as a respiratory sedative, but also as a stimulating expectorant, as the following case will attest:

Case I.—Pulmonary tuberculosis, stage of cavities.—W. B. C., aged 28 years, suffering from cough, expectoration, emaciation, loss of appetite, loss of sleep, inability to lie in certain positions, of eight years' duration, weight 122 pounds. Physical examination revealed a number of cavities in both lungs, although the laboratory test did not show any tubercle bacilli. Guaiacol, arsenic, eucalyptus, ichthyol, and creosote benefited him but imaginatively. Glyco-heroin in doses of one teaspoonful every two hours, to start with, to be taken from 8 a. m. to 6 p. m., benefited him to such a degree that, to quote from his letter to me, he "gained four pounds in four weeks." Lungs appear to take on a better action as regards respiration, thus giving him, indirectly, proper sleep, followed by the ability to eat with a relish. Coughs little at night; advised him to expectorate forcibly during day. Patient now finds relief by taking his doses every eight hours.

Now, why this beneficial action in tubercular disease, for this case was taken at random from my case-book, as are all the other cases? Simply because Glyco-heroin loosens cough, promotes the throwing off of the noxious material from the lung cavities, and thus gives relief, breathing becomes easy, oxygenation takes place with renewed vigor, and, by careful attention as regards regulation of dosage, patients of this class may live many years in comparative comfort as regards distressful symptoms.



Case II.—Acute largnyitis.—George F. N., aged 14 years. Coasting, perspiration, and no overcoat, a good combination to bring on an acutely inflamed laryngeal mucous membrane. Pain on swallowing, talks in whispers, temperature 101.5 degrees F., pulse 135, respiration 23, cough, barking like dog, uncomplicated case of laryngeal inflammation. Stokes' expectorant did not relieve, seemed to increase cough. Glyco-heroin, full doses of one teaspoonful every three hours, while producing much sleepiness, reduced inflammation, cough, and pain in three days. I then combined it with squills and syrup balsam tolu, to be given every four hours until completely relieved.

Glyco-heroin, in cases of laryngitis, seems to me to take the place of all heretofore vaunted sure cures, without reservation. Vomiting from the use of opium, morphine, codeine, etc., always delays a cure in cases of laryngitis; not so with Glyco-heroin, which in my hands thus far has not produced vomiting.

Case III.—Chronic bronchitis, asthma, and emphysema.—Mrs. H. D., aged 44, has had asthmatic attacks, every fall and spring, for the past eleven years; not in winter, but only at the beginning and end of seasons. Iodines, senega, squills, digitalis, and cupping gave relief, but with the penalty of a return of more severe attacks. Dyspnea, cough and expectoration in this case was something frightful to witness. In this case, prompt hypodermic injection of 1-8 grain of morphia relieved somewhat, followed by the use of Glyco-heroin, one teaspoonful every hour for three doses, then every four hours, and on the third day every six hours. In this case the Glyco-heroin seemed to continue the effect of the morphia.

A new point in favor of Glyco-heroin is that it enhances the effect of morphia when given hypodermically. Although in seven other cases of asth-

ma, with attacks similar to the above, Glyco-heroin was administered, in two-hourly doses, with the remarkable effect that the cough and dyspnea ceased within four hours.

Case IV.—Pharyngitis.—Miss D. F., aged 17 years, complained of fever, hoarseness, cough, and soreness in throat. Culture of reddened throat did not reveal any streptococci or Klebs-Lœffler bacilli. Glyco-heroin, given every three hours, cured in two days. The after-cough was removed in four more days, by the administration of Glyco-heroin in doses of one teaspoonful every six hours.

Case V.—Acute bronchitis.—Carl F., aged 22 years; chills, fever, soreness of throat, pain on swallowing; cough dry, no expectoration; Glyco-heroin, one teaspoonful every two hours, promoted expectoration, changed the character of the cough, and gave relief in a most happy manner. In my opinion there is no doubt that patient would have ended up in a pneumonia, unless he was relieved inside of 48 hours. As regards his cough, character of it was so completely changed that the bronchial disease seemed to "flow from him," as it were.

In whooping cough, 22 cases from my case-book show that I prescribed Glyco-heroin with permanent and speedy results, given in doses of five and ten drops, as indicated, to these little sufferers. It seemed to be borne well and efficaciously. Readers do not care much for the recital of cases; bare facts are meat from which all can subsist with profit. Glyco-heroin (Smith) is far superior to codeine, as sedative, in affections where a direct action upon the respiratory center is looked for. For, certainly, its action must be direct where it is noted that respiration is deepened and prolonged. No vomiting, no nausea, no headache, no depressing of powers of mind or body, no untoward symptoms. Glyco-heroin is par excellence the remedy for conditions affecting the respiratory organs, whether in children or adults, in the weakly and in the strong.

By Justin Herold, A. M., M. D., Former House Physician and Surgeon, St. Vincent's Hospital, New York City; Former Coroner's Physician, City and County of New York; Member of the New York County Medical Association, County Medical Society, Medical Society of the Greater City of New York, Medico-Legal Society, Society of Medical Jurisprudence, and New York Academy of Medicine.

The Medical and Surgical Monitor of Indianapolis with Dr. S. P. Scherer as editor and the Central States Medical Magizene with Dr. S. E. Earp as editor and Dr. S. C. Norris as managing editor have amalgamated and hereafter will be known as the Central States Medical Monitor to be published in Indianapolis under the editorial direction of Dr. S. E. Earp with Dr. S. P. Shearer as associate Dr. Earp was editor of the Monitor from 1898 to 1903 at which time he accepted editorial control of the Central States Magazine and continued so until the Monitor merged with this journal. Dr. Shearer has recently been editor of the Monitor succeeding Dr. A. E. Sterne about a year ago. It is believed that this will become a strong, independent journal with no alliances whatever to hamper its success.

Hepatic Colic and Gastric Catarrh Successfully Treated by Lavage of the Stomach With Hydrozone.

The patient, an engineer by profession, of fair size and weight, about 45 years old, of temperate habits, nervous temperament, has been a severe sufferer of hepatic colic and catarrh of the stomach for several years. Although having a fair appetite, the patient had frequent attacks of vomiting a large quantity of mucus and bile.

In addition to the above symptoms, he was troubled with periodical attacks of hepatic colics, which were so severe that I was induced to diagnose his trouble as being caused by the presence of gall stones.

None of the remedies which were prescribed previous to January 5, 1904, seemed to have any beneficial effect, while the periodical acute attacks made their reappearance more frequently (every four or five weeks).

Having read in medical journals several clinical reports in which Hydrozone and Glycocozone were highly recommended in the treatment of diseases of the ailmentary canal, I concluded to prescribe Hydrozone before meals and Glycocozone after meals in varying doses for about two months without any appreciable benefit. A dose of castor oil was also administered every other week, while olive oil was given at bedtime.

The patient was growing weaker quite rapidly until an acute attack of hepatic colic which occurred beginning of April, 1904, plainly showed that the above treatment was not powerful enough to subdue the cause of his trouble.

Then I persuaded him to resort to lavage of the stomach with diluted Hydrozone.

I commenced treatment on the 5th of April, 1904, with Hydrozone too grammes, warm water one quart; the stomach was washed every third day in April and every second day in May, when the Hydrozone was increased to 150 c. c. (about five fluid ounces), and was kept at that amount throughout the treatment; during the month of June the stomach was washed out every day, July every fourth day, August and September once a week.

The improvement was noticeable already at the end of April, when the quantity of bile and mucus was much lessened. In September the benefits derived from this treatment proved conclusively that it had not been used in vain. Internal treatment was by means of Glycozone, two teaspoonsfuls before and after each meal, and every three weeks a good dose of oleum ricini.

Up to date the patient has not had another attack of hepatic colic since April, 1904, while he is now enjoying good health.

The results that I have obtained in this particular case are so gratifying that I resort now exclusively to Hydrozone and Glycozone in the treatment of all cases of stomach diseases, and I believe that with the exception of stomach and intestinal disorders resulting from the presence of a malignant growth, all other cases can be successfully treated as above outlined.

By Francis H. Weismann, M. D., New York City. (Published by the Saint Louis Medical and Surgical Journal, August, 1905).

Brigadier-General George Miller Sternberg,

Resinol in Pruritus

RESINOL is the specific for all forms of pruritus. There is nothing that produces such immediate cessation from its pain, burning, and intolerable itching.

RESINOL SOAP

possesses the healing qualities of the Ointment, and is invaluable for cleansing affected parts.

I find by testing it that your Resinol Ointment is a most excellent preparation for all skin diseases; and for pruritus ani et vulvæ, I have never found anything better.—I. B. HARGETT, M. D., Cleveland, O.

I used your Resinol Ointment a short time ago in a most intractable case of pruritus ani which defied every other remedy used. It was relieved in a very few applications. I regard your preparation as a triumph over this detestable symptom.—J. G. KELLY, M. D., Hornellsville, New York.

I tried your Resinol Ointment on myself. I had suffered from pruritus ani, or marginal eczema, for 25 years, and had tried many remedies without any relief, until Resinol proved soothing and stopped the itching instantly.—J. T. HICKMAN, M. D., Mt. Jackson, Virginia.

Resinol Ointment is the first local application I have found, that has given lasting and gratifying results in the treatment of pruritus vulvæ.—DR. GRACE WINTERSTEEN, Harrisburg Pennsylvania.

SAMPLES SENT ON APPLICATION.

RESINOL CHEMICAL COMPANY,
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AUSTRALASIAN AGENTS,
CHAS. MARKELL & CO., SYDNEY, N. S. W.

U. S. A., retired, has been appointed to the chair of Preventive Medicine in the Faculty of Graduate Studies in The Gorge Washington University.

Professor Sternberg received the degree of Doctor of Medicine in 1860 from the College of Physicians and Surgeons, New York; LL.D., 1904, from the University of Michigan; LL.D., 1907, from Brown University; appointed assistant surgeon, 1861, in the United States Army; captain and assistant-surgeon, 1896; major and surgeon, 1875; lieutenant-colonel and deputy surgeon general, 1891; brigadier-general and surgeon general, 1893; retired June 8, 1902; member of many medical societies and president, 1898, American Medical Association.

Professor Sternberg has entered upon his work in the direction of original research work bearing upon the transmission of diseases.

Idiosyncrasy or Some Other Reason.

We meet with many cases in practice suffering intensely from pain, where for an idiosyncrasy or some other reason it it not advisable to give morphine or opium by the mouth, or morphine hypodermically, but frequently these very cases take kindly to codeia, and when assisted by antikamnia its action is all that could be desired.

In the grinding pains which precede and follow labor, and the uterine contractions which often lead to abortion, in tic douloureux, brachialagia, cardiagia, gastralgia, hepataigia, nephralgia and dysmenorrheoa, immediate relief is afforded by the use of this combination, and the relief is not merely temporary and palliative but in very many cases curative. The most available form in which to exhibit these remedies is in "Atikamnia & Codeine Tablets."

These trade-mark crisscross lines on every package.

Gluten Grits AND **BARLEY CRYSTALS,**

Perfect Breakfast and Dessert Health Cereals.
PANSY FLOUR for Pastry, Cake and Biscuit.
Unlike all other Foods. Ask Grocers.
For book or sample, write
FARWELL & RHINES, Watertown, N. Y., U. S. A.

SAL HEPATICA

The original effervescing Saline Laxative and Uric Acid Solvent. A combination of the Tonic, Alterative and Laxative Salts similar to the celebrated Bitter Waters of Europe, fortified by addition of Lithium and Sodium Phosphates. It stimulates liver, tones intestinal glands, purifies alimentary tract, improves digestion, assimilation and metabolism. Especially valuable in rheumatism, gout, bilious attacks, constipation. Most efficient in eliminating toxic products from intestinal tract or blood, and correcting vicious or impaired functions.

Write for free samples.

BRISTOL-MYERS CO.,
Brooklyn, New York City.

The physician cannot be too careful in the selection of the kind of codeia he administers. The manufacturers of "Antikamnia & Codeine Tablets" take every precaution, in fact, they refine and purify every grain of codeia which enters into their tablets. This not only prevents habit and consequent irritation, which follow the use of impure codeia, but it does away with constipation or any other untoward effect.

Dr. W. Raymond McDannell, of Rockford, Ill., under date of September 21, 1905, writes that having used eusoma with satisfactorry results in uncurative conditions he determined to rely upon it as an antiseptic and antipurulent in a case in which he performed the operation of circumcision under extremely unfavorable conditions.

The patient was an old man of very uncleanly habits who had a number of soft chancres and vegetations which occluded the mestus. It seemed that general infection could scarcely be avoided on account of the personal inclinations of the patient; he would not have anything clean about him; but by keeping the wound soaked with seven days with a wet dressing of eusoma a perfect result was obtained.

Dr. McDannell says that he doesn't often get excited over anything, but eusoma is worthy of recommendation and he is enthusiastic about it.

The active medicinal constituents of each fluid dram of Eusoma are, Echinacea Angustifolia 15 grs., Thuja Occidentalis 2 grs., and Baptisia Tinctoria 4 grs.

Daniel's Conc. Tinct. Passiflora Incarnata is indispensable as a Woman's Nervine. It is employed in Hospitals, Sanitariums and by the leading physicians as the best calmative and tonic for nervousness peculiar to the female sex. It is given with satisfaction during menstruation, pregnancy, childbirth and the menopause. It soothes the entire nervous system, tones it to a rational condition and strengthens it or the normal functions of life. It nourishes and restores the depressed vital organs. It is valuable in painful menstruation without flexion of the uterus.

We call the attention of readers to the advertisement of the Robinson-Pettet Co., Louisville, Ky., which will be found on another page of this issue. This house was established fifty years ago, and enjoys a wide spread reputation as manufacturers of high character. We do not hesitate to endorse their preparations as being all they claim for them.

Elcampsia.

In closing the discussion on eclampsia at the meeting of the British Medical Association a few weeks ago the President of the Section, Dr. Herbert Spencer remarked that the main points of the discussion were ignorance of the pathology, uncertainty of prognosis, and the recommendation of gentleness in treatment. In other words, if the discussion at Leicester is to be regarded as a reflection of our present attitude toward eclampsia, it is one of almost complete ignorance as regards pathology, prognosis, and treatment. As is usual, however, in matters where there is little positive knowledge there is plentiful difference of opinion, and the views of pathology held by the members present at Leicester were even more various than the schemes of treatment. When one has said, however, that eclampsia is the result of the presence of a toxin in the body, and that such toxin may cause ecchymosis or patches of necrosis in the organs, one has said nearly everything that can be said with certainty of the pathology of the condition. There still remains a wide field for conjecture as to the source of the toxin, its nature, and the site of its activity in the body. As regards the latter point, some hold that it is freely circulating in the juices, while others believe that it is for the most part in close combination with fixed cells. On a decision of this question will depend in part the justification of one of the modes of treatment more often recommended than practised—venesection. As regards treatment, it is curious how long it has taken to decide for or against the induction of premature labour as the best means of preserving the woman's life. Some of the speakers at the Leicester meeting were strongly in favor of this procedure, but their arguments showed some lack of appreciation of the point at issue. For instance, much labor was devoted to justifying the sacrifice of the child which would probably die in any case, with the object of saving the mother. The question is, however, whether emptying the uterus has in fact the effect of saving the mother, and this point is far from established. When, therefore, a physician suggests that pregnancy should be terminated if a woman shows albuminuria with casts and deficiency of waste products, and boasts of having terminated five successives pregnancies in the same woman in order to spare her kidneys, it is necessary to emphasize the fact that it is yet unproved that termination of pregnancy is a benefit to the woman's health. The only figures immediately bearing on the point are those collated by Dr. Herman, and they show that the percentage of mortality after operative delivery was 25.5, while the mortality among those subjected to operation was 20.8. While, therefore, the argument for immediate delivery is not complete when eclampsia is actually present, such operation can hardly be justifiable when eclampsia is only anticipated. As regards the sedative treatment of eclampsia, the general opinion at Leicester seemed to favor the morphia rather than the chloroform method, and those who distrusted the morphia method had for the most part misunderstood it and had probably failed by not administering sufficiently large doses. The whole subject of eclampsia remains one of the least known in the range of medicine, and the Leicester discussion is useful at least in emphasizing the fact of our ignorance.—London Medical Press.

Committee of Physicians to Arrange Plans For State Medical Society.

At a meeting of Mecklenburg Society, held

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The Standard Antiseptic

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A non-toxic antiseptic of known and definite power, prepared in a form convenient for immediate use, of ready dilution, sightly, pleasant, and sufficiently powerful for all purposes of asepsis; these are advantages which Listerine embodies.

* * *

Listerine
Dermatic Soap

An antiseptic detergent for use in the antiseptic treatment of diseases of the skin.

Listerine "Dermatic" Soap contains the essential antiseptic constituents of eucalyptus (1%), mentha, gaultheria and thyme (each 1-2%), which enter into the composition of the well-known antiseptic preparation Listerine, while the quality of excellence of the soap-stock employed as the vehicle for this medication, will be readily apparent when used upon the most delicate skin, and upon the scalp. Listerine "Dermatic" Soap contains no animal fats, and none but the very best vegetable oils; after its manufacture, and before it is "milled" and pressed into cakes a high percentage of an emollient oil is incorporated with the soap, and the smooth, elastic condition of the skin secured by using Listerine "Dermatic" Soap is largely due to the presence of this ingredient. Unusual care is exercised in the preparation of Listerine "Dermatic" Soap, and as the antiseptic constituents of Listerine are added to the soap after it has received its surplus of unsaponified emollient oil, they retain their peculiar antiseptic virtues and fragrance.

* * *

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A sample of Listerine Dermatic Soap may be had upon application to the Manufacturers.

Lambert Pharmacal Company, St. Louis, U. S. A.

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yesterday, a committee of arrangements was named to prepare for the coming of the North Carolina State Medical Society, which meets in Charlotte next May. Dr. R. L. Gibbon was chosen as chairman and the following will assist him: Drs. Robert J. Brevard, John R. Irwin, W. O. Nisbet and E. R. Russell, and Messrs. Peter Marshall Brown and R. H. Jordan.

Dr. E. C. Register, being president of the State Society was made an ex- officio member of the committee. The meeting of the State Medical Society next May in this city will be very largely attended. In fact it is thought the largest attended meeting in the history of the Society will be held here.

In view of this fact the committees named yesterday will have much to look after. From time to time there will be a meeting of this committee in order that all the plans for the reception of the physicians may be well looked after.—The Charlotte News.

Weak Nerves.

Weak nerves are the source of a great many diseases that range from a slight headache to insanity. A little nervousness easily develops into hysteria and invovlves the entire system. The duty of a sedative is to reduce the tension of the nerves and thereby either prevent its increase or soothe it to a normal condition if it has grown into a disease. Daniel's Conct. Tinct. Passiflora Incarnata is a natural sedative to nervous excitement, and not only allays irritation, but controls the entire organism. Its distinctive characteristics, which appeals most strongly to the physician, is that its after-effect are natural. It produces no reaction as do the opiates in creating a temporary stimulation.

For weak and irritable women and fretful, teething babies, Passiflora is administered with the utmost satisfaction. Every form or nervous disorder yields to the sedative properties of this product of the May-pop and gives the patient calm, refreshing sleep.

We have just received from W. B. Saunders & Company, of Philadelphia, the widely known medical publishers, an unusually attractive illustrated catalogue of their complete list of publications. It seems to us, in glancing through this catalogue, that a list of the Saunders authors is a census of the leading American and foreign authorities in every branch and specialty of medical science. And new books are being added and new editions issued with a rapidity that speaks well for the success and progressiveness of the house. While comparisons are always odious, still we feel it but justice to say that, in the presentation of facts about the books listed that a probable buyer wishes to know, and also for beauty and durability of mechanical getup, this catalogue surpasses anything we have heretofore seen. It is truly representative of the house. We understand a copy will be sent free upon request.

Acute Nasal Catarrh.

The conditions obtaining in Acute Nasal Catarrh are especially those of an inflammation of any mucus membrane. First, an engorgement of the capillaries, then an exudation of serum into the tissues, then a further exudation on the part of the mucus or serous membrane.

To attempt to terminate the trouble or alleviate the discomfort by an astringent or any wash of an acid nature is simply to temporarily lessen the secretion without in any degree reducing the congestion or stimulating the circulation ,thus actually rendering the condtion worse than before.

A remedy to be effective must first empty the mucus membranes and then prevent a reengorgement by stimulating the blood vessels into increased action and compelling them to resume their normal functions.

This is pre-eminently the province of Glyco-Thymoline.

By its power of promoting exosmosis, it purges the mucus membrane as soon as it is brought into contact with it.

By its anesthetic property it soothes the pain, and by its power of stimulating the circulation it relieves the capillaries of their local congestion and restores the normal circulation.

The immediate cause of a catarrhal discharge is an engorged mucus membrane. Empty by exosmosis and you relieve it instantly.

In the general treatment of Nose and Throat troubles, especially when iflammatory conditions prevail, and palliative treatment is called for as a preliminary to operative interference, no other remedy gives the immediate and establishes the aseptic conditions afforded by Glyco-Thymoline.

J. A. Herring, M. D., Myrtle Springs, Texas, says in the Alkaloidal Clinic: "I have just received the Clinic, and find an article by Dr. Thudichim on 'Echinacea.' I have used it with perfect success for the last five years, first employing Lloyd's specific tincture and later Ethol, from Battle & Co., containing echinacea and thuja. I give the former the credit. And I want to say that it is a specific for all that Dr. Thudichum says. It has been so in my hands. I have just counted the empty Ethol bottles in my office and find twenty-six used in the last year. In fact, people come twenty-five and fifty miles to have me treat old sore shins and the like. It stops boils and carbuncles, and I give it in all grandular inflamations. Pus and Ethol cannot stay in the same place. Try it doctor, and you will be convinced.

Every little helps.

"One of the spicest little journals that comes to the Secretary is the American Medical Journalist. It contains many very readable articles, and its last issue seems to be chiefly directed against the various transactions of the American Medical Association, especially against the Journal. We rather think that there is a great deal of truth in what it has to say and advise all who wish to know both sides of the question to read it. It is published by D. A. O'Gorman, of New

JOHANN HOFF'S MALT AND IRON

(PEPTONATE OF MANGANESE AND IRON.)

Is an ideal preparation to build up

BLOOD AND BODY

(Each wineglassful contains 1 gramme of Peptonate of Manganese and Iron.)

It is a Nutrient Oxygen Carrying Agent

Contains only a minimum amount of alcohol (less than 3%); is more readily absorbed into the circulating fluid than the iron preparation by itself.

Johann Hoff's Malt and Iron is of marked and certain value in all forms of Anæmia, Chlorosis and general debility.

EISNER & MENDELSON CO. of New York,

SOLE AGENTS.

York."—From the Journal of the South Carolina Medical Association (Published under the direction of the Publication Committee of the South Carolina Medical Association), Charleston, S. C., Sept. 21, 1905.

Uric-Acid Diathesis—Report of a Successful Case.

By Wm. H. Anghram, M. D., Hh. G., New York.

Because of the kaleidoscopic symptomatology traceable to the hypothetical condition known as the uric acid diathesis there is, perhaps no causal factor more often overlooked by the general practitioner, and, if suspected, more indifferently combatted. "Regulate the diet and give plenty of water" has for years been the dictum in the treatment when the presence of uric acid is suspected or established.

It was formerly almost universally held that the various conditions due to the presence of uric acid were the outcome of errors in diet. Haig, in his Epitome of the subject, classifies these conditions under two heads. (1) The local or precipitation group, due to the irritating presence of uric acid in a fibrous tissue, either in solution or suspension, as in gout, and (2) the circulation or solvent group, due to excess of uric acid in the blood (collemia) and its effects on the circulation, blood pressure, combustion and nutrition, as headache, epilepsy, convulsions, chorea, hysteria, neurasthenia, nervousness, mental depression, and a variety of conditions. The first group, according to Haig, are relieved by solvents; the second by retentives, while both are prevented by a uric acid free diet.

Many eminent authorities take issue with Haig's theories concerning the treatment of these conditions, some protesting that diet does not play so important a role as has been supposed.

It is not the purpose of this brief article to combat or agree with Haig and his followers or those who hold opposing views. It may not prove devoid of interest, however, to give the history of a case in which diet played little part in the treatment, however much causal importance it may have had.

Mrs. J. G., aged 33, married, one child. First came under my care when the child was six years of age.

Family History—Negative.

Previous History—Healthy as a girl. Menstruation normal. For some months previous to marriage she suffered from so-called indigestion and developed a tendency to melancholia. Pregnancy normal except for mental depression, which, however, was not sufficiently marked to warrant interference with pregnancy. Deliverey normal, child healthy. Mental depression and indigestion persisted after delivery, each growing more marked. Cystitis developed a few months after birth of child, urination being accompanied by violent pains. Became very hysterical, the attacks becoming more and more frequent. Three years before she came under my notice she was operated

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upon for gall-stones, several small stones being removed. This was followed by some relief as to the violent character of the pain experienced, but the cystitis and mental nervous symptoms persisted.

Present History—When patient came under my care she was so hysterical and the melancholia so marked that her family feared insanity was imminent. The violent attacks of gallstone colic were again a pronounced symptom and at times urination was so painful that catherization had to be resorted to for days at a time. A small stone passed was found to contain uric acid. I immediately ordered restricted diet, exercise and quantities of Buffalo Lithia Water. I soon found that I could not control the diet to any appreciable extent. Being in her own home she had access to the table and pantry, and I found that she gratified to the fullest her almost voracious appetite; nor could I get her to take more exercise than the average woman takes. Medicines seemed to have little effect, so I fell back upon the solvent anl eliminant plan, insisting that she drink abundant quantities of this water. For some strange reason this idea was the only one that seemed to impress her and she religiously consulted, at frequent intervals, the bottle of water which she had always at hand. In a short time I noticed an abatement of all the distressing symptoms, which fact stimulated her ambition to drink more of this water. She gradually increased the amount to two quarts per day, and with this simple treatment improved gradually until at the end of about three weeks she was entirely free from cystitis, had no more attacts of gall stone colic, the hysteria disappeared and she is today as happy and cheerful as the average woman.—Can. Jour. Med. and Surg., Nov. 1905.

THE ANTISEPTIC BABE.

(By Edna Kingsley Wallace.)

We can sterilize his bottle, we can boil his little mug;
We can bake his flannel bandages and disinfect the rug
That envelops him when he partakes of medicated air,
But there's one impossibility that leaves us in despair,—
And a not unjustifiable one, you will allow—
To-wit: We fear 'twould never do to sterilize the cow!

So we feed the baby Medicus's hygienic dope,
And we wash his face with germicidal antiseptic soap;
And we brush his little toofums—or the place where they will be—
With diluted Glyco-Thymoline, most sanitarilee;
Then despair to see a milky effervescence supervene
On a countenance which theretofore was surgically clean.

Thus although we strive to conquer every septic circumstance
Yet we greatly fear a ghastly alimentary mischance;
For albeit we bake and boil his things, scrub and soak and souse,
As if in his anatomy forever cleaning house—
The recklessness with which he sucks hi vagrant tiny thumb
Imperiils muuch his precious antiseptic little tum.

We are careful of his hours, we are thoughtful of his toys;
We are minduful of his sorrows, and judicious of his joys;
We are prayerfully considerate of needful discipline,
Of our little "Mother's Handbook" and the precepts writ therein;
And we strive to render sterile all designed for mouth or tum,
But one frightful danger menaces—we cannot boil his thumb!

—Harper's Monthly for Aug., 1905

American Medicine From a Chinese Point of View.

An interesting view of American medicine from a detached standpoint is to be found in a volume entitled, "As a Chinaman Saw Us." Whether the work be really that of aforeigner or merely the pose of a clever literary man, it is sufficiently interesting as giving the impressions an intelligent Celestial might receive in studying the society of the great Commonwealth. The point that chiefly appeals to him in regard to medicine is the contrast between the regular physicians of the better class, and the horde of quacks and mountebanks of all sorts, who prey on the credulity of the people. "America has a body of physicians and surgeons who are a credit to the world, modest, conscientious, and with a high sense of houor, but they are as dragon's teeth in a multitude of the so-called 'quacks' who take the money of the masses and prey on them, protected in many cases by law. No one profession demonstrates the abject credulity of the great mass of Americans as that

In pneumonia warmth is important because cold skin means contracted cutaneous vessels, and this means increased congestion of the pulmonary vessels."

Dr. J. E. Winters to the N. Y. Academy of Medicine.

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DIRECTIONS:- Always heat Antiphlogistine in the original container by placing in hot water. Needless exposure to the air or water impairs its usefulness.

Prepare the patient in a warm room. Lay him on his side and spread Antiphlogistine thick and as hot as can be borne over one-half the thoracic walls. Cover immediately with a cotton-lined cheese-cloth jacket, previously made and warmed. Roll the patient over on dressed side and complete the application. Stitch front of jacket.

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of medicine." "In no land under the sun are there so many ignorant, blatant fakirs preying on the people, and in no land do you find so credulous a throng as in America, yet claiming to represent the cream of the intelligence of the world." This credulity, which we think may rightly be imputed to the Americans, and, in a lesser degree, to our own people, is certinly a curious feature in an advanced civilization. The Chinaman draws attention to one point in which he thinks Chinese practice is in advance of American in that the aim of the former is preventive, of the latter curative. "The best way to cure is to watch the patient and keep him well, or prevent him from being taken sick."—The Medical Press or Circular, London.

The Tri-State Medical Association of the Carolinas and Virginia meets at White Stone Lithia Springs, S. C., last of February or first of March, 1906. Dr. H. A. Royster, of Raleigh, N. C., is President. Dr. R. E. Hughes of Laurens, S. C., is Secretary and Treasurer.

The following appointments have been made:

Chairman of Section North Carolina.

Medicine, Dr. E. T. Dickinson, Wilson, N. C.

Surgery, Dr. D. T. Tayloe, Washington, D. C.

Obstetries, Dr. C. A. Julian, Thomasville, N. C.

Gynecology, Dr. J. E. Stokes, Salisbury, N. C.

Eye, Ear, Nose and Throat, Dr. R. V. Brawley, Salisbury, N. C.

South Carolina:

Medicine, Dr. F. J. Carroll, Summerville, S. C.

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Virginia:

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Surgery, Dr. J. Shelton Harsley, Richmond, Va.

Gynecology, Dr. W. E. Anderson, Farmville, Va.

Obstetries, Dr. J. M. Robinson, Danville, Va.

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Dr. J. W. Long, Greensboro, N. C.

Publications:

Dr. G. T. Sikes, Grissom, N. C.

Dr. T. P. Whaley, Charleston, S. C.

Dr. C. M. Edwards, Richmond, Va.

Committee on Delinquents:

Dr. J. F. Swann, Cunningham, N. C.

Dr. W. C. Black, Greenville, S. C.

Dr. L. G. Frazier, Port Norfolk, Va.

Committee to Report on President's Address as to Prevention of Typhoid Fever and Tuberculosis.

Dr. F. J. Clemenger, Asheville, N. C., Chairman.

Dr. V. C. Reynolds, Asheville, N. C.

Dr. J. H. Teague, Laurens, S. C.

Dr. H. H. Wymon, Aiken, S. C.

Dr. W. S. Gordon, Richmond, Va.

Subject of Discussion Next Meeting—Rheumatics.

Leaders of Debate, Dr. J. P. Munroe, Davidson, N. C.; Dr. J. H. Allen, Spartanburg, S. C.; Dr. C. B. Earle, Greenville, S. C.; Dr. Virginus Harrison, Richmond, Va.

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"I endorse worthy proprietaries, but I most heartily condemn the great tendency of the 'half-baked,' co-called manufacturing 'chemist,' to foist upon the profession and public cheap imitations of standard preparations."

The Kentucky Valley Medical Association held its twenty-first semi-annual meeting at Lexington on Friday and Saturday, October 27th and 28th. The program include the following papers: Typhoid Fever, by Dr. J. S. Turner, of Irvine; Infant Typhoid with Report of Case, by Dr. M. A. Offert, of Jackson; Oxaluria, by Dr. H. H. Roberts, of Lexington; Gunshot Wounds and a Mountaineer's Method of Treating Same, by Dr. C. M. Mansfield, of Staunton; Relation of Alkaloids to Galenics, by Dr. W. F. Waugh, of Chicago; Diphtheria, by Dr. J. H. Evans, of Beattyville; Hiccough, by Dr. C. B. Smith, of Lexington. The officers of the association are: President, Dr. A. H. Barkley, of Lexington; vice-president, Dr. J. S. McDonald, of Beattyville; secretary, Dr. B. Littlejohn, of Clay Citv.

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The Kentucky State Medical Association.—Atthe annual meeting, held at Louisville on October 18, 19, and 20, 1905, the following officers were elected: President, Dr. C. Z. Aud, of Cecilian; vice-president, Dr. Murison Dunn, of Richmond; Dr. J. R. Coleman, of Paducah; and Dr. J. M. Salmond, of Ashland; secretary, Dr. J. B. Bullitt, of Louisville; treasurer,

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A prominent practitioner in the South, whose wide experience justifies authority, recently embodied in a paper the following statement: In diseases of the intestinal tract in children or adults, whatever the diagnosis may be, we always trace the origin of the trouble to a want of alkalines to correct an excess of acidity during the digestive process." This is of deep interest to us as it gives the key to the marked results following the administration of the alkaline antiseptic, Glyco-Thymoline, which not only corrects existing hyperacidity with its concomitant symptoms, but causes by its exosmotic property a rapid depletion of the engorged membrane and a stimulation of the glandular system to normality, whereby the proper amount of alkaline fluids will be secreted. Therefore, it is well to remember that Glyco-Thymoline not only corrects the effects of disease but aims to re-establish those processes of digestion and assimilation which are wanting.

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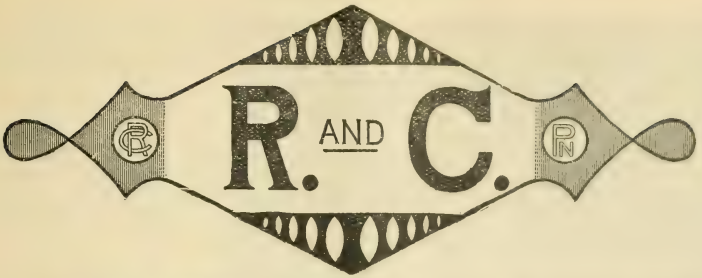

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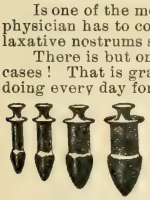

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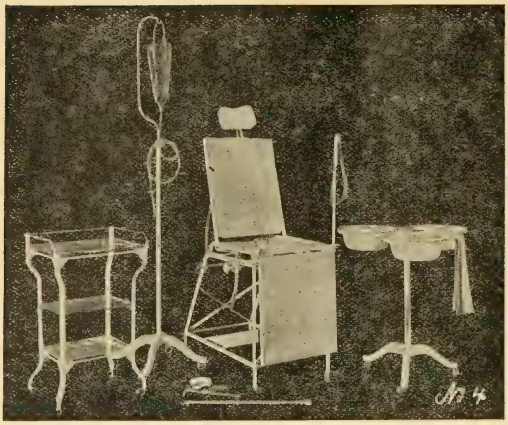
Reported Discovery of the Micro-Organism of Syphilis.

News comes from Paris of the discovery of the specific micro-organism of syphilis. The original discovery was made by Professors Schaudiu and Haussman, of Berlin, in the shape of a spirillum that had satisfied the conditions necessary for identification as the causative organism of the malady in question. In communicating this momentous observation to the Paris Academy of Medicine recently, the Dean, M. Metchnikoff, said that he had established the presence of the specific microbe in monkeys inoculated with the virus taken from the human subject. Coming from so cautious and distinguished a scientific observer, this confirmation carries with it the utmost weight and authority. Should the discovery be ultimately confirmed, as appears to be more than likely, before long a new era will possibly be established in the treatment of one of the great scourges of mankind. Sooner or later the essential cause of syphilis was, humanly speaking, certain to be disclosed by the researches of modern science. For some years past the microbial origin of the disease has been accepted generally in the world of scientific medicine. It is curious that such well-marked bacterial diseases as syphilis, scarlet fever, typhus, measles and small-pox have been enabled to keep their secrets so long from the enthusiastic and well-equipped onslaught of the soldiers of the modern bacteriological army.—Medical Press and Circular.



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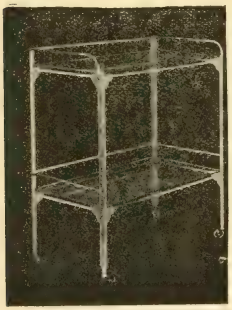

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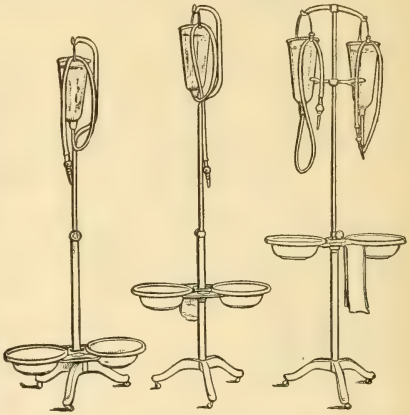

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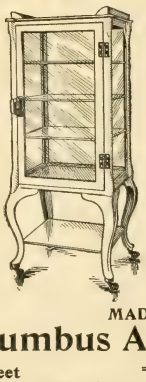

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eign societies was extensive, although he never attained the chairmanship of the German Surgical Society. His journey to America a few years ago, and his visits to many of the cities of this country, will be remembered. He impressed Americans during that visit as a man of peculiarly wide knowledge and deep technical skill. Medicine unquestionably loses in him one of its leading men, and one who has done much more than most of his colleagues in advancing the science of surgery along the broadest lines. His somewhat premature death will be mourned in America almost in the same degree as in Europe.

The attention of the medical profession is being directed to the use of Sal Hepatica in Typhoid fever and inflammatory conditions of the bowels. It appears to be a very safe saline laxative in such affections, being less obnoxious to the organism than sodium phosphate alone or other salines and is more readily eliminated.

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Professor Karl Wernicke.

Within a few days of the death of Professor v. Mikulicz the death of Karl Wernicke was also announced. Wernicke was born in 1848 in Tarnowitz in Upper Silesia, studied and received his degree in Breslau in 1870, and in 1878 became Westphal's assistant in the Berlin clinic of psychiatry and neurology. In 1885 he became extraordinary professor and in 1890 ordinary professor in psychiatry and neurology at the University of Breslau. Within a year he had become Hitzig's successor at Halle.

Wernicke was a pupil of Meynert, and he must be regarded as the only one who has consistently continued his work through life in Meynert's spirit. As a psychiatrist Wernicke must be given a high place for his originality and for the number and character of the problems which he undertook to solve. In the year 1874, when but twenty-six years old, he published his work on sensory aphasia, which did much to round out the knowledge inaugurated by Broca's discovery of the motor speech area. In 1881 his textbook of Disease of the Brain began to appear, a work which is still consulted. Wernicke's aim was to establish psychiatry on a firmer scientific basis, and to bring it, as far as possible, into association with brain anatomy and brain physiology. He was also a keen clinical observer, and we are indebted to him for several new clinical pictures. In spite, however, of his capacity as an investigator, Wernicke had several disappointments among which were the failure to be called either to Berlin or to Munich when vacancies occurred at those universities. His professional activity was confined to small universities, and at one time, for many years, at Breslau he was deprived of a clinic. In spite of such disappointments, not uncommon among German physicians of great distinction, his work was constant, suggestive and useful in the progress of that department of medicine to which he devoted his life. His place, like that of Professor Mikulicz, will be hard to fill.

Rush Medical College Will Add a Fifth Year

It has been announced by this college that beginning with the session of 1905-1906 a fifth year will be added to the curriculum, which for the present will be optional. The work of this year will be that of (a) a fellowship in one of the departments of the college, or (b) an internship in the hospital under the following conditions: (1) Each student taking such work will be under the supervision of the faculty by whom the hospital in which the internship is taken must be approved. (2) The student must present evidence of thorough clinical work and, if possible, an exhaustive study of a selected group of clinical cases involving original work. (3) He will be required to pass a special examination at the end of the year. On the successful completion of this fifth year he will receive the degree of Doctor of Medicine cum laude.

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Cancer Research.

At the annual meeting of the General Committee of the Imperial Cancer Research Fund, held at Marlborough House recently, under the presidency of his Roya Highness the Prince of Wales, reports were presented from the secretary, from the general superintendent, and from the honorary treasurer. The report of the superintendent, Dr. Bashford, was mainly a summary of two scientific reports just published by the authority of the Executive Committee, and dealing respectively with the statistical investigation of cancer and with the growth of cancer under natural and experimental conditions. With reference to the former subject, Dr. Bashford mentions that a first series of reports from India includes 146 cases in natives living on a vegetable diet, 137 in natives whose food was mainly flesh, and 222 in natives living on a mixed diet. He sketches the nature of the general statistical inquiries which have beeu undertaken, and points out the difficulties which stand in the way of obtaining sufficient and trustworthy data. Much additional evidence has accumulated in support of the view that the number cases of cancer, wherever occurring, depends to an important extent upon the number of aged individuals coming under observation, both in different races of mankind and in animals. It is not yet possible to determine statistically whether cancer is really increasing as the incrcase in recorded cases would imply.

A very large number of inoculation experiments have been performed upon mice, and have been attended with a degree of success which only became apparent after the experiments had been systematically continued for almost two years. It has been proved that all the features of cancer can be reproduced experimentally. a result "the most important and far-reaching of those hitherto obtained." The true nature of some features and their relations to one another have been revealed by experiment. Certain fundamental features have also been separated from others of subsidiary importance, and hitherto unsuspected properties have been brought to light.

We may summarise some of the more important of the results attained by saying that the disease in mice has been proved to be in all respects like cancer in the human subject, and that it is readily inoculable from mouse to mouse. The malignant new growth is an independent organism except in so far as it is dependent for its nutrition upon the mouse in which it is growing. It is, indeed, a sort of parasite, consisting of special cells, but the stroma in which these cells are supported, and the vascular system by which they are nourished, are supplied by the host. When a fragment of cancer is introduced into the body of a healthy mouse, any portions of stroma or of vascular tissue which may be included perish, while the essential and isolated cells remain and increase. A cancerous growth perishes, of course, with the death of the host, but may be preserved alive indefinitely by previous inoculations into other hosts, and thus seems to have no term of existence of its own. Under artificial propagation a single mouse tumour has produced an amount of tissue sufficient to yield a giant mouse as large as a St. Bernard dog, or several thousand adult mice. In the amount which suffices to kill the individual primarily affected only an infinitesimal fraction of the power of cell division residing in malignant tissues, as such, is manifested, and hence a single case gives an imperfect conception of the process concerned. Old age is most constantly associated with the origin of cancerous proliferation,

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but it has been possible to show that the enormous cell-division which endangers life is not dependent upon constitutional changes in the animal primarily attacked. Under artificial propagation it proceeds as well in young mice as in old ones. In experimental transmission the tissues of the new hosts do not acquire cancerous properties, and it has been definitely proved that no analogy exists between cancer and any known form of infective or contagious disease, so that cancer is not caused by the parasite of any such disease entering the body from without. Future work must be directed to ascertaining why cancer arises de novo in each individual attacked, why it is more intimately bonnd up with the later than with the earlier stages in the life of the individual, and what change or changes the cells of normal tissues undergo in acqniring cancerous properties. The work done has thrown fresh light on the well-known features of the disease, and points to the necessity of investigating the minute cell processes which are responsible for the ceaseless cell-division and growth of cancer when propagated artificially. The results already attained are such as to justify great hopefulness for the future.

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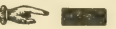
a Medium can, and heat by placing the can in hot water. Do not delegate its application the first time to some one who has never seen the thing done, but personally apply the entire contents of the can to the affected joint, spreading it on the skin as thick as this 

about the joint and beyond the boundaries of the inflammation. Cover with a liberal amount of absorbent cotton and a suitable compress. At the expiration of 24 hours, or when the dressing can be peeled off nicely, remove it and apply a new one. After a few days the affection will, as a rule, be but a memory.

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sponsibility, we will have less of these conditions, a continuation of which invariably produces a capillary varicosis, with its train of evils, manifested more frequently by copious and disagreeable discharges called leucorrhea. But even as late as in this last-named condition the physician will learn that Ergoapiol (Smith) judiciously, consistently and determinedly administered, will prevent much needless mutilation by effecting a cure.

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J. K., age 45, called April 20th, stating that he had had a hemorrhage from the bladder and had been under treatment by a prominent physician of this city—a specialist in genito-urinary diseases—he was pale, exsanguinated and weak from loss of blood, with a hard, painful lump in right groin; very tender on pressure. By use of catheter, drew off urine. which was about four ounces, and about one-half was blood, with some coagulated shreads following. With hypodermic needle, injected in the lump, which was three inches in length, in three places with five minims of cresylone. This gave him great relief. I washed out the bladder with alum solution, and told him to report next day, which he did. The hemorrhage was the same, but the soreness was gone. I then washed out the bladder with solution of lead and alum (Bilroth's solution) and had him report again the next day; the hemorrhage had been the same. Then I washed out the bladder with Eusoma, one part to three parts of water, and had him report the next day, when to my surprise he stated that there had been only a trace of blood, which he said had not shown until four hours before. I then provided him with a soft catheter and had him use the Eusoma twice a day, morning and evening, with the result that the blood entirely disappeared and has not shown a trace but once, which was about a week ago, when he had failed to use the Eusoma as directed. While using the Eusoma as a wash, I have given him an antiseptic tonic by the mouth. His appetite has much improved, his color is nearly normal, he has gained three pounds in weight and feels much better. He is following his vocation as a barber and bids fair to make a full recovery. Before coming to me he had been examined with the cystoscope and microscopically, and case pronounced a papilliform carcinoma. I found a slight stricture of the urethra, which does not prevent using the catheter, and for which I have not given any treatment, wishing to make sure of the vesicle hemorrhage first. From the progress made so far, and the great improvement made in general health, I think the promise of complete recovery is good.—The Medical Herald, July, 1905.

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The efficacy of antikamnia tablets in neuralgia is beyond dispute and is well illustrated by the following case: An old nurse who had suffered from severe neuralgia at intervals for many years and whose hair had become gray on one side of her head from this cause, expressed herself as having gained more relief from antikamnia tablets than from all of the many medicines which had been prescribed for her. For pain about the head from almost any cause, antikamnia tablets always have undoubted preference over all other coal-tar preparations. They are a useful adjuvant in the treatment of migraine, and the headaches of school children promptly yield to moderate doses.

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Decrease in the Food Value of Bread.

During the past few years there seems to have been a tendency toward too great refinement in the manufacture of many foodstuffs, and much of the health-conserving qualities and nutritive value are sacrificed to beauty of form and delicacy of taste. In this effort to produce foodstuffs which present an attractive outward appearance, no article of food has suffered more than bread.

In the days of our forefathers, before the roller-milling process had replaced simpler methods of flour manufacture, wheat flour, when converted into bread, contained much greater food value than it does to-day. The competition among millers to-day seems to be directed chiefly towards turning out the whitest flour, regardless of its food value, with the result that we have achieved almost perfection in white bolted flour, but we have lost much of the gluten and soluble phosphates contained in the wheat berry. The cellulose or bran, also, is almost entirely eliminated from bread made from modern white bolted flour, and consequently little is left to stimulate the bowels to healthy activity.

More recently these conditions have been partially remedied by the introduction of "breakfast foods" made from the whole wheat berry. Although exaggerated claims have been made by the manufacturers of some of these foods, the value of the flaked whole wheat food is generally recognized by physicians. It is to be regretted that the medical profession, as the authoritative influence in dietetics, has not manifested a more general interest in the matter of foodstuffs advertised to the laity, not only in sickness, but in health. The education of the public in this respect has been left largely to the manufacturers of the various articles offered for sale, and naturally the maximum amount of merit is claimed, in most instances, irrespective of facts.

The best type of whole wheat flaked food, and one which, we are gratified to state, has been advertised only on legitimate and conservative lines, is Egg-O-See, manufactured by the Battle Creek Breakfast Food Co., of Quincy, Ill. In the manufacture of Egg-O-See only the choicest California wheat is used—all of the wheat except the husk being utilized. It is thoroughly steam-cooked, partially predigested, flaked, and baked at high temperature, the whole process being mechanical, even to placing the food in germ-proof packages.

The flaked form is a great aid to the ease of digestion, as the food is more readily acted on by the saliva, and the conversion of the unconverted starch to sugar more easily accomplished than with bread

On account of containing the full value of the wheat berry, it is much richer in protein and phosphates than bread, as well as having an abundance of carbohydrate, and a sufficiency of fiber.

The Council of Pharmacy, Created by the American Medical Association.

The Dios Chemical Company has complied with the requirements of the Council of Pharmacy recently organized by the American Medical Association, they having furnished said Conncil complete formulæ of their several preparations, namely—Dioviburnia, Neurosine, and Germiletum. These products are prepared exclusively for Physicians to prescribe, and the formulæ have always been freely circulated to the Doctors.

The efficiency of Dioviburnia, Neurosine, and Germiletum is assured from the great care in the selection of fresh and pure drugs entering into their composition as well as the scientific manner of combining.

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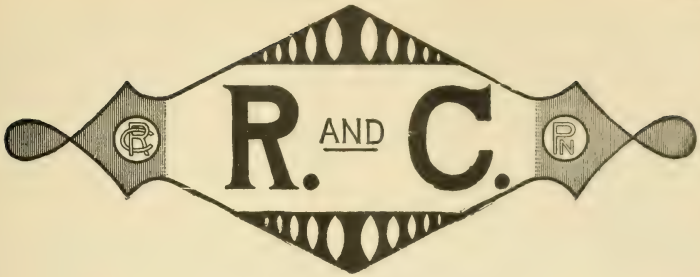

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Clinical Notes on Hagee's Cordial of Cod Liver Oil Compound.

In this progressive age it is pleasing to note that the pharmaceutical chemist is keeping well to the front in the matter of improving the older preparations as well as in the production of new and more valuable ones. Notable among these achievements is Hagee's Cordial of Cod Liver Oil Compound. It is an elegant combination of particularly useful remedies, which are too well known to require more than casual mention here.

Each fluid ounce represents thirty-three per cent pure Norwegian Cod Liver Oil with six grains Hypophosphite Lime and three grains Hypophosphite Soda in perfect solution.

Combining as it does palatability together with the most active tonic, alterative, reconstructive and digestive properties, it is well tolerated by the most sensitive stomach and in my experience has never failed to produce a decided improvement in the digestive function in cases where serious disturbance was present.

A brief history of the following cases is appended, believing they will prove of interest in the way of demonstrating the results that may be expected to follow an intelligent application of this valuable preparation.

Case I.—Miss P., age 31; occupation, seamstress. Family history: Two brothers and one sister had died of phthisis pulmonalis. Patient had been suffering from severe cough, fever, night-sweats, and progressive emaciation for several months. Physical examination which was supplemented by microscopic examination of sputum established diagnosis of tuberculous disease, affecting apices of both lungs. The stomach was extremely irritable, which fact had interfered seriously with previous treatment.

Treatment: Bowels were regulated and careful instructions given concerning observance of hygienic rules, etc. Hagee's Cordial of Cod Liver Oil Compound was prescribed tablespoonful three times daily after food.

Improvement was prompt and at the expiration of two months patient was discharged cured, having regained her normal weight and all of the old symptoms having disappeared. This was more than a year ago and she has since remained well.

Case II.—Mr. G., age 40; occupation, miner. Had bronchitis for many years with profuse expectoration. Treatment was ordered as in the preceding case and continued six weeks when patient was discharged well. He has been kept under observation during the past six months and has had no recurrence of the old trouble.

In cases of anaemia following acute diseases I have obtained the most gratifying results from the use of the remedy.

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N. B. Shade, M. D., late editor North American Medical Review, Washington, D. C., says in the Medical Examiner and Practitioner:

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What are you going to do about it?

The Substitutor—Ananias was an angel compared to him. The first stole money and then lied about it.

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I have used Sanmetto quite extensively in cystitis, prostatitis and gonorrhea, and find it far superior to any proprietary preparation or prescription I have ever used. It controls admirably those cases of prostatitis where there is excessive desire to urinate frequently but an inability to do so.

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Fremont, Ohio.

At the next meeting of the Mississippi Valley Medical Association to be held at Indianapolis, Ind., October 10, 11, 12, the annual addresses will be delivered by Dr. Arthur R. Edwards, of Chicago, and Dr. W. D. Haggard, of Nashville, Tenn.

Dr. Edwards has chosen for the subject of his address, "Certain Phases of Uremia, Their Diagnosis and Treatment," and Dr. Haggard will discuss in his address, "The Present Status of Surgery of the Stomach." In addition to these addresses there will be the annual address of the President, Dr. Bransford Lewis, of St. Louis.

A cordial invitation is extended to every physician in the valley to attend this meeting for which a large number of interesting and valuable papers have been promised.

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about the joint and beyond the boundaries of the inflammation. Cover with a liberal amount of absorbent cotton and a suitable compress. At the expiration of 24 hours, or when the dressing can be peeled off nicely, remove it and apply a new one. After a few days the affection will, as a rule, be but a memory.

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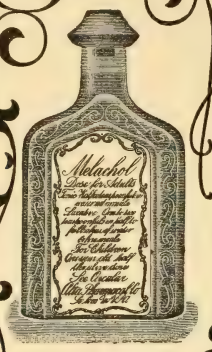

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An indisposition to engage in any sort of activity and a distressing feeling of weariness are maladies cured and permanently prevented by a systematic and continual use of MELACHOL as a nerve food and glandular tonic.

MELACHOL acting as a physiologic stimulant becomes laxative when taken in the larger doses, and the fact commends it to those troubled with headaches, constipation and sluggish liver.

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sightly, unhygienic and troublesome flax-seed poultice and the newer proprietary article called Antiphlogistine, a physician must needs be prejudiced, indeed, who will prefer the former. . . . It may be a matter of theoretical indifference what preparation we prescribe, but it may be quite a different matter with the patient who has to use it for long periods."

"Does it not strike you as somewhat incongruous that we alone of all professions and trades should rise up in arms against a co-ordinate branch which is continually striving to assist us in improving our therapeutic weapons? If we would take advantage of the opportunity offered to make intelligent selection of such preparations of drugs of reliable concerns as appeal to reason and common sense, those of us who do so will certainly have an advantage over those who do not."

As regards the refilling by the druggists of prescriptions of proprietary remedies, he says: "If I am called to treat a sprain of the ankle, and find it necessary to order an antiphlogistic application, it would be just as easy for the patient to send to his druggist daily for more flax-seed meal or iodide, as it would be for him to order more cans of the more cleanly proprietary preparation, Antiphlogistine. A tonic or cough medicine, quinine mixture or capsule would share the same fate whether proprietary or extemporaneous."

"If the intelligent use of the drugs mentioned is not injurious per se, why should we protect the laity against their use any more than against the employment of any other drugs? Would the committee advocate the abandonment of calomel, castor oil, mag. sulph., quinine, flax-seed meal, paregoric, laudanum or carbolic acid because the laity can also go to the drug store and purchase these

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Special courses in laboratory and clinical subjects are offered to limited numbers of graduates in medicine at different times during the session.

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just as they can Cascara preparations, Phenacetin, Disterine, Antiphlogistine, etc.?"

Extracts from an article in the Texas Medical Journal for March, 1905.

Hamamelis—Its Therapeutic Uses and the Poison Perils of Its Adulteration.

In an address delivered April 26, '05, before the Danbury Medical Society on "The Practical Value of Old Remedies," John V. Shoemaker, M. D., L. L. D., of the Medico-Chirurgical College, Philadelphia, Pa., spoke of witch-hazel, or hamamelis, in the following terms:

"Witch-hazel, or Hamamelis Virginiana, an excellent old-time remedy, has a well-defined range of usefulness within which it is without a rival. Externally and internally it is sedative and astringent. It is used as lotion and ointment in many diseases and injuries of the skin, in leg-ulcer and varicose veins. It is serviceable in acute and chronic diarrhœa, internal hemorrhages, bronchorrhea, epistaxis, varicose veins and varicocele.

"The distilled extract of hamamelis is a valuable application to sprains and bruises. Hamamelis is very useful in checking epistaxis, bleeding sockets after the extraction of teeth, bleeding hemorrhoids and many other forms of hemorrhage. An ointment containing witch-hazel is of service in burns, eczema, erysipelas, sunburn, seborrhea, acne, etc. A diluted fluid extract of hamamelis makes an effective lotion in hyperidrosis. A witch-hazel lotion or ointment is an excellent application in fissure of the anus. When given internally this remedy exerts the same astringent and sedative action and is highly valued in the treatment of acute and chronic diarrhœa, dysentery, hemorrhage from internal organs, purpura hemorrhagica, varicose veins and ulcers and varicocele."

In his standard work on "Therapeutics," Hare also states that it is "a plant of extraordinary remedial power," and adds the following highly significant declaration:

"The one official preparation of the U. S. P. is the fluid extract (Extractum Hamamelis Fluidum, U. S.; Liquidum, B. P.), dose 5 to 20 drops, (0.35-1.30). The dose of the distilled extract, which is not official and is a perfectly clear liquid, is from 30 drops to 1 drachm (2.0-4.0), and this is much the best preparation for internal and external use. Unfortunately, the preparations of the drug vary very much in both odor and efficacy. Some of the proprietary preparations of witch-hazel are more active than those ordinarily dispensed in the drug store. This is due to greater care in their preparation and to the fact that they are sold in original packages without exposure to the air."

The truth of Hare's contention that the common commercial witch-hazels of the retail drug store vary as to both odor and efficacy, and, for the reasons given, are less active than the proprietary article, as well as the peril of the common commercial and unidentified witch-hazels of the market, has been emphasized in startling fashion by such well-known and creditable medical investigators and expert witnesses as Buller and Wood, whose voluminous report to the American Medical Association on the adulteration of witch-hazel and other medicinal extracts, etc., by wood alcohol and formaldehyde, has attracted the attention of the medical profession and press throughout the country and still continues to excite the interest and evoke the comment of both.

As an example of the extent to which this adulteration has been carried by unscrupulous manufacturers of the common commercial and unidentified varieties of the product, it may be stated that of seventy (70) samples recently purchased from as many wholesale and retail dealers in the commercial article in six of the largest cities of the United States, scrupulous investigation by the most reputable analytical chemists of the country showed that fifty-two (52) of the samples in question contained wood alcohol (poison) or formaldehyde (poison), or both.

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Beaufort	Dr. T. J. Nicholson, Booth	Dr. Ira M. Hardy, Washington
Bladen	Dr. W. H. G. Lucas, White Hall	Dr. Newton Robinson, Elizabethton
Buncombe	Dr. C. V. Reynolds, Asheville	Dr. Gaillard S. Tennant, Asheville
Brunswick	Dr. E. G. Goodman, Elpaso	Dr. J. A. Dosher, Southport
Burke	Dr. George H. Moran, Morganton	Dr. I. M. Taylor, Morganton
Cabarrus	Dr. W. H. Lilly, Concord	Dr. F. O. Rogers, Concord
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Caldwell	Dr. A. A. Kent, Lenoir	Dr. W. P. Ivey, Lenoir
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Cherokee	Dr. J. F. Abernathy, Murphy	Dr. S. C. Highway, Murphy
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Craven	Dr. Chas. Duffy, Newbern	Dr. R. Duval Jones, Newbern
Davie	Dr. M. D. Kimbrough, Mocksville	Dr. W. C. Martin, Mocksville
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Duplin	Dr. John M. Faison, Faisons	Dr. Ben. R. Graham, Wallace
Durham	Dr. A. Cheatham, Durham	Dr. G. H. Ross, East Durham
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Franklin	Dr. J. E. Malone, Louisburg	Dr. S. P. Burt, Louisburg
Gaston	Dr. R. M. Reid, Gastonia	Dr. L. N. Glenn, McAdensville
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Onslow	Dr. W. J. Montford, Ward's Mills	Dr. E. L. Cox, Jacksonville
Orange	Dr. I. H. Manning, Chapel Hill	Dr. C. D. Jones, Hillsboro
Pamlico	G. S. Attmore, Stonewall	H. P. Underhill, Bayboro
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Pender	Dr. J. R. Williams, Rocky Mount	Dr. — — Crowell, Burgaw
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Transylvania	Dr. E. S. English, Brevard	Dr. Goode Cheatham, Brevard
Union	Dr. R. Armfield, Marshville	Dr. Ed. S. English, Brevard
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In discussing this question, the "Bulletin of Pharmacy" expresses the opinion that "the practice of substituting wood alcohol for grain alcohol in the manufacture of medicinal preparations is a most insidious and pernicious means of poisoning, and the sales of remedies and toilet preparations manufactured or adulterated with wood alcohol should be restricted by law."

Until, however, such laws be enacted by all States, it should be obvious, in the face of the pernicious conditions described, that the perils of the poisons specified—as is suggested by Hare—may be avoided in cases in which Hamamelis is indicated only by prescribing exclusively a standardized proprietary product of guaranteed and invariable purity, quality and strength such as Pond's Extract of Hamamelis, which embodies and possesses all the qualities and advantages indicated by Hare as accruing from the greater care exercised in its preparation and the fact that it is sold only in original packages, without exposure to the air.

Pond's Extract of Hamamelis Virginiana (as the plant is botanically described by Hare and Shoemaker, or Virginica, according to Coston) has been relieving pain and performing other beneficent functions in the conditions indicated by Shoemaker for the past sixty years. While it has been imitated and substituted in every conceivable form during this extended period, it stands out today all the more efficient and esteemed by such comparison, and, in addition to its superlative medicinal properties and action, is a positive guarantee to physician and patient alike against any and all of the poison perils of the common commercial witch-hazels so vividly portrayed by Buller, Wood, Darlington, Lloyd, Hare, Gamble, London Lancet, Journal of the American Medical Association, Medical News, Medical Record, Therapeutic Gazette, Boston Medical and Surgical Journal, Druggists' Circular, Bulletin of Pharmacy, Western Druggist, and numerous other medical writers and professional publications of equal standing and authority.

Natural Sleep.

The treatment of sleeplessness in this generation has become somewhat simplified because it is now recognized as a symptom and not as a distinct disease. It appears in such various phases and is associated with so many disorders that it is conquered with difficulty. But whether the defect is functional or structural it demands correction. It is a mistake to employ sedatives and hypnotics indiscriminately. First of all, it must not derange the assimilative system; it must have no depressing ef-

fect on the heart and blood vessels; and must be palatable. The only preparation which approximates the theoretical hypnotic, because it meets each of these requirements so completely, is Daniel's Conct. Tinct. Passiflora Incarnata. Its action is free from the destructive and irritative effects of the gastric mucosa. It is a local anesthetic to the stomach and a sedative to the entire nuclear areas.

The Journal of the American Medical Association in a review of the "Protonuclein Therapy in Typhoid says, Protonuclein is indicated according to Latta in Typhoid, because it increases leucocytosis and thus adds to the resisting power of the cell structure in overcoming disease. As soon as he suspects Typhoid, without waiting to insure the diagnosis, he commences to give Protonuclein, usually giving large doses in the beginning, lessening the quantity until the system has responded to the treatment, two tablets every three hours being the usual dose, the patient taking no other food nor medicine for two hours. At the end of the first half hour of this period, 4 to 6 ounces or more of hot water are given and thirty minutes later the dose of Protonuclein and then an hour allowed for absorption. In this way every three hour period is divided into two parts, the first two hours devoted to Protonuclein and hot water and the last one to feeding and whatever other treatment may be indicated. Frequently during the first twenty-four hours no benefit may be produced. The temperature and disturbing symptoms may increase. After that both will decline. The treatment is not an abortive treatment, still, it is not unusual to have a patient better on the eighth or tenth day than would be the case with the old method at the end of the third week.

A New Liquid Antiseptic.

Parke, Davis & Co. have recently introduced a new liquid antiseptic of considerable power, called Cresylone. It contains 50 per cent of Cresylic Acid and forms clear solutions with water in all proportions.

A two per cent solution of Cresylone is not only an excellent disinfectant for instruments and hands, but a valuable detergent and lubricant, too. It is said not to injure metallic or rubber instruments, though celluloid articles are apt to become friable under its action.

In the treatment of wounds a one per cent solution is usually employed, and a two per cent solution may be used in profoundly septic cases when more vigorous measures are indicated.

Cresylone completely arrests the development of pus organisms and is, therefore, indicated in the various suppurations with which the general practitioner has to contend. In the treatment of otorrhea, irrigation with a 1-2 per cent. solution is said to be of benefit. A solution of the same strength is of value in the treatment of ozena.

As it removes odor, it may prove of service in gangrene. In cancer of the cervix uteri the application of gauze saturated with a solution of Cresylone will remove the odor that accompanies this disease. For disinfecting sputa and stools Cresylone commends itself in the sick room, hospital ward, schools, prisons, etc.

Therapeutically, the use of Cresylone has been suggested in various pathologic conditions, notably in the treatment of gonorrhea, lupus, tonsilitis, eczema, and cystitis of the female.

Dr. W. H. Wilder,of Birmingham, Ala.,has been elected president of the Tri-State Medical Association of Tennessee, Georgia, and Alabama, to succeed Dr. H. L. Appleton of Gadsden, Ala., who recently resigned.

service. Many of these people could have found good rooms in other quarters at from 50 cents to one dollar per day for the same service. This element of "graft" was a disgrace and should never have been permitted to mar an otherwise enjoyable meeting. The rooms in private houses engaged by Mr. Bowers, at a rental of 50 or 75 cents per day were sub-leased by him for $2.00 to $3.00 per day, while good rooms were obtainable in first-class hotels, but a short distance from the Portland, at a rate of $1.50 per day. We hope this last experience may be a warning to committees in the future. Not since the association met in Denver have we had occasion to criticize hotel managements, on the score of "grafting."—Medical Herald, St. Joseph, Mo., August, 1905.

Glyco-Thymoline as a Mouth Wash in Fever Cases.

When the temperature keeps a point or two above normal for a few hours, the membrane of the oral cavity becomes dry and parched, causing great discomfort to the patient. Supplemented with this frequently comes the formation of sordes on the teeth and more or less inflammation along the marginal surface of the gums. The flow of saliva is checked and the sense of taste greatly interfered with. In cases of this kind we may win the gratitude of the patient for all time by urging the frequent use of an alkaline mouth wash of the nature of Glyco-Thymoline. This solution is admirably adapted both by physiological action and therapeutic effect to meet the requirements. The normal flow of saliva is reestablished, the further formation of sordes is prevented and the mouth is kept sweet and clean. No one can estimate the amount of comfort derived by the patient under this simple treatment.

Battle & Co. have recently issued the Seventh of their series of Twelve illustrations of the Intestinal Parasites. They are beautiful and should be studied by every physician. These illustrations can be secured free by writing to Battle & Co., St. Louis, Mo., and mentioning this journal.

QUESTIONS ASKED BY THE VIRGINIA BOARD OF MEDICAL EXAMINERS, JUNE, 1905.

Section on Obstetrics and Gynecology.

Questions in Obstetrics.

1. Name the most important abnormalities of the female pelvis.

2. Give the approximate diameters of the living female pelvis, and also of the average diameters of the fœtal head at term.

3. What are the relative pelvic floor lacerations, as to frequency, in first and subsequent labors: about what per cent. is inevitable, and what methods may be taken to prevent such laceration during labor?

4. What abnormalities may favor the production of face presentations, and what circumstances, in such cases, improve the prognosis?

Questions in Gynecology.

1 Describe the cystoscope and its use in female bladder cases.

2. Name the different displacements of the uterus. Give causes of dysmenorrhea and the treatment of endometritis.

3. Give diagnostic symptoms and appearances of rectocele and cystocele, and describe operation for the latter.

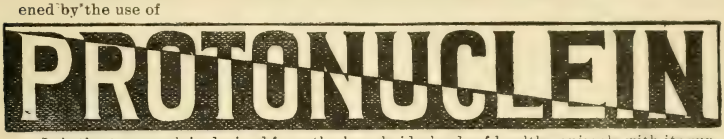
4. Give symptoms, causes, diagnosis and, briefly, the treatment of pelvic peritonitis.

Section on Practice of Medicine.

(Answer all questions. Sign by number only.

IN TYPHOID FEVER

Your treatment can be enhanced. the temperature kept lower and convalescence shortened by the use of



It is the true nuclein derived from the lymphoid glands of healthy animals with its surrounding protoplasm.

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1. Give definition, causes, symptoms, and treatment of (a) active, and (b) passive, congestion of liver.

2. What is measles? Describe the eruptive stage, give diagnosis, complications and sequelæ, and state your management of a case.

3. Define neuritis, giving its causes and symptoms.

4. Give origin, course, duration, and termination of tuberculous peritonitis. Give diagonostic differences from cirrhosis, and other forms of general peritonitis.

5. Differentiate, clinically, renal, hepatic and flatulent colic, each from the other, and all from appendicitis.

6. What diseases are most common to (a) the summer season, and (b) the winter season? Why?

Section of Physiology.

1. (a) What are the vital or physiological characteristics of protoplasm? Name four. (b) Name the four elementary tissues. (c) What are the three (3) great primary divisions of organic substances forming the chief part of the solid and fluid tissues of the body?

2. (a) Give physical properties and histological characteristics of the blood. (b) Give process of cogulation or clotting of the blood. (c) What physical factors are necessary to the maintenance of arterial blood pressure?

3. (a) Describe mouth digestion. (b) What is the action of gastric juice on food? (c) What is the succus-entericus and what are its functions?

4. (a) Describe the pancreatic juice, naming its ferments, and describing the part each plays in digestion. (b) Describe the mechanism of norma intestinal movements. (c) Describe vomiting and its mechanism.

5. (a) Give number of spinal nerves and the function of anterior and posterior roots. (b) Locate the visual centre. (c) Locate the respiratory centre.

6. (a) What is the function of the third cranial nerve? (b) What is the function of the fourth cranial nerve? (c) What nerve supplies the posterior one-third of the tongue with taste and sensation?

Questions in Hygiene.

1. Define drainage and sewerage. Explain what is meant by ground air and ground water, and how they may become factors in causing disease. Name the two diseases most commonly associated with soil pollution.

2. What are some of the physiological effects of exercise, and what are some of the pathological results of over-exertion?

3. Give some of the common modes of conveying the infection of typhoid fever. What preventative measures should be adopted against transmitting the infection in handling a case?

4. State the physiological effects of alcohol on the brain, circulation, secretions, temperature and metabolism. What organs are most commonly affected by its prolonged or excessive use, and the most common pathological condition found in them?

5. State the most improved hygienic methods of dealing with tuberculosis from both a remedial and prophylatic point of view.

Questions in Medical Jurisprudence.

1. Define medical jurisprudence.
2. What is a wound? How are wounds classified?

What are the characteristics of each class? What are the distinguishing differences between ante- and post-mortem wounds?

3. What might lead to the detection of a case of feigned epilepsy?

4. What extremes in time of access on part of the husband are usually allowed by common law in determining the question of the legitimacy of birth?

5. On what occasion may pregnancy become the question of medico-legal inquiry? How are the signs of pregnancy classified? What do you understand by super-fœtation?

Section on Anatomy.

1. Describe the radio-carpal articulation.

2. Describe the pericardium.

3. (a) Give a short description of the lymph vascular system, including its arrangement and characteristics. (b) Describe a lymph gland, and state in what regions of the body they are chiefly located.

4. Give the origin and insertion of the following muscles: Triceps, pronator radii teres, tibialis anticus, gastrocnemius.

5. (a) Give the origin and termination of the following arteries: Brachial, left sub-clavian, thoracic aorta, posterior tibial. (b) Name the branches of the axillary artery. (c) Describe the internal mammary artery.

6. (a) Describe the spheno-palatin (Meckel's) ganglion. (b) Give the origin, course and distribution of the great sciatic nerve.

Questions on Materia Medica.

1. (a) Internally administered, state the action of small and large doses of ipecac. (b) What symptoms are produced by poisonous doses of tartar emetic? Give antidote. (c) Give the principal alkaloid of cinchona, its dose and incompatibles.

2. (a) What are the physiological effects of aloes? (b) How does the action of codeine differ from that of morphine? Give dose of each. (c) Give the principal alkaloid of belladonna, its dose, and state how eliminated.

3. (a) Give the physiological action of ergot of rye. (b) How does santonin affect vision? How is it eliminated, and what is the dose? c Mention the objection to the use of most of the salts of iron, and state which preparation is especially credited with diuretic properties.

The Ideal Medical Association Journal.

The Journal of the American Medical Association seems to have succeeded in drawing upon itself a good deal of unfavorable criticism by its recent policy in the matter of advertising, the raising of the price thereof, putting annoying restrictions on the same, as well as in its methods of obtaining this form of patronage. This was only to be expected from a journal published ostensibly as the organ of a great national association of professional men, yet managed after and run on the lines of strictest commercialism, even to the copyrighting of its every issue.

The fact is that a "journal" of an association like the American Medical—an association upholding the "Ethics" of the profession in their strictest entirety, should not, and in reason, can not be fashioned after purely commercial models. The ideal "journal" of this sort should constitute a forum for the full, free and impartial discussion of all subjects concerning the art and science of medicine in which the members of the association are interested. Its very raison d'etre—the cause of its existence, is not, ostensibly, to make money, but to furnish its readers a faithful and unwarped record of the proceedings of the association that founded and maintains, or rather which should maintain it, and as such, it should not carry advertisements of any description, and least of all, advertisements of proprietary remedies.

If there be a rational objection that can be urged against the use of proprietary preparations by physicians, it is not that their manufacturers seek the protection afforded by the trade-mark laws; neither is it that they refuse to disclose in their fullest detail the secret processes by which they are compounded, nor that they cannot stand the test of some arbitrary "ethical" standard; but because there is no journal published in which their merits or demerits are freely and impartially discussed; in which physicians who have used them can record their clinical experiences with them, just as they might do with an universally accepted or recognized article of the Materia Medica.

To fill this hiatus in medical journalism, this want of a true medical forum, should be the role of the journal of a great national medical association. If a physician of repute has used a preparation, whether secret or not, and desires to give the members of the profession an account of his experiences therewith, the columns of his association's organ should be open to him to do so, of course, under such precautions as are necessary to ascertain the standing of the writer and to make sure that he is neither in the pay of the maker of the preparation on the one hand, nor actuated by malice, on the other, accordingly as his report is favorable or unfavorable.

The acceptance and publication of the advertisements of proprietary preparations by the "journal" is a quasi endorsement of them, or at least it is so regarded by the manufacturers, and by such acceptance and publication, the editor or manager places himself in a rather awkward position. After taking the money of the manufacturer with one hand, the "journal" cannot consistently attack him in his editorial pages, or permit others to do so, without, at least, subjecting itself to very severe criticism; since if the article advertised is without merit, or if its manufacturer is in any way dealing unfairly with the medical profession, the "journal," by giving him the benefit of the publicity which its advertising pages afford, actually aids the manufacturer in the imposition and itself becomes particeps criminis.

Moreover, the "journal" of an association, like the American Medical, in soliciting, or even accepting advertisements of proprietary remedies, at once puts itself on a level with the house organ or the minor society organs which are supported by advertising contributions, obtained more or less, by coercive methods. The American Medical Society is a body of physicians associated together for mutual instruction and advancement in the art and science of medicine, and the dues which they pay in entitle them to receive a copy of a journal free from all bias, and beholden to no one except members of the association.

If, as stated, the journal cannot be maintained by the dues thus paid in, it should be discontinued, or published less frequently, or the dues should be increased. The members should not, and as honorable, self-respecting men and physicians, cannot afford to permit others—men outside the medical profession—to bear the expense of keeping them posted on the progress of their profession. Least of all should they or the men whom they employ to publish their "journal," seek to make money by the publication of advertisements of patent or proprietary remedies—things the use of which they condemn as opposed to the "ethics" of the association.

Of all things contrary to the true spirit of medical science that the ideal journal of a medical association should shun, is the copyright of its matter, thus putting a lock or seal upon the information it publishes, so that it cannot be given a wider publicity by other medical journals, except as a privilege, under penalty of the law.—National Druggist, St. Louis, Mo.

QUALITY AND TECHNIQUE.

Your success in the practice of medicine depends largely upon two things: The quality of the remedial or medicinal agents used, and your ability to properly use them.

Inert agents and faulty technique will make a failure of the best of physicians. A standard article cannot build a reputation for any man unless he has the wisdom to properly use it.

When called upon to treat a Non-Suppurative Synovitis, say of the knee in an adult, prescribe the best possible remedy—

Antiphlogistine

a Medium can, and heat by placing the can in hot water. Do not delegate its application the first time to some one who has never seen the thing done, but personally apply the entire contents of the can to the affected joint, spreading it on the skin as thick as this

about the joint and beyond the boundaries of the inflammation. Cover with a liberal amount of absorbent cotton and a suitable compress. At the expiration of 24 hours, or when the dressing can be peeled off nicely, remove it and apply a new one. After a few days the affection will, as a rule, be but a memory.

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are much more promptly absorbed than articles of a semi-fluid or more compact nature. Hence the first point of the superiority of liquids over the alkaloids is the fact that they are absorbed with greater rapidity, and thus their beneficent action is commenced more quickly.

The actien of the liquids are more gentle, because, as a rule, they are less powerful than the alkaloids which are extracted by means of chemical manipulation from the various fluid preparations that yield the alkaloid principles.

All who are familiar with the workings of nature know, and must admit, that the more gentle the process the more lasting and complete is the result obtained. The constant dripping of water, drop by drop, will wear away the hardest substance over which violent measures, though more energetic in their onset, would utterly fail.

The soothing effect of liquid medication will aid materially in producing a more lasting relief from those conditions which are the cause of the departure from the normal or healthy standard.

The liquid preparation—be it infusion, decoction, tincture or fluid extract—contains all of the plant constituents, and combines in Dame Nature's own way the various ingredients.

Plants yield their medicinal qualities to a varying proportion of water and alcohol. The practical pharmacist knows that the right proportions must be used in order to get a reliable and complete representation of the plant under treatment. Again, the plants must be used at different stages of their existence in order to obtain the most reliable results. Some must be used in the green state with all their juices; others should be partially dried and a part of their liquid substance allowed to evaporate, while still others must be in a completely dried condition.

Physicians understand very well that they get better results from the medicines of some manufacturers than they do from those of others. They do not always stop to consider why this is so. It lies all in the process of manufacture. The practitioner who uses tinctures made from fluid extracts will be very apt to lose faith in medication, because of the poor results which he, many times, obtains. He charges the fault to the medicinal agent, when, in reality, the fault lies in the method of preparation. The blame should be laid at the door of the pharmacist.

The rapidity of the absorption of fluids by the blood will prevent the cumulative action which sometimes results from the use of the alkaloids. This is a factor which should not be forgotten. Many deaths could be properly charged to this mode of action in the alkaloids.

Many times the alkaloidal principle must be placed in a fluid vehicle in order to get the best results, as, for instance, the whole method of hypodermic medication. There is no question but that the hypodermic syringe has been a blessing to mankind. But where is the practioner who would like to treat his cases wholly with this instrument?

The alkaloids, when you have said the best you can in their favor, are, at best, only a part of the original plant. We are apt to term them the active principle of the plant. How are we to demonstrate this fact absolutely? Can it be demonstrated? I think not. Who would be rash enough to assert that all of the good of cinchona lies in the quinine or that of nux vomica in the strychnine? And not only of these two, but also of the entire list of plants, which, by means of manipulation, can be caused to give up their alkaloidal principles.

Those who are at all familiar with the early history of the Eclectic School of Medicine know how nearly it came to shipwreck because of the wild enthusiasm over the idea of alkaloidal medication

For Aged People

With old age comes inactivity, loss of appetite and many gastric disturbances. What is needed is a nutrient easy assimilated.

Burnham's Clam Bouillon

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gives the greatest amount of food energy with the least labor for the digestive organs. It is soothing and can be retained by the stomach of the aged when other foods cannot be tolerated. Owing to the process of manufacture the product is partially predigested and thoroughly sterilized. The rapidity with which it is absorbed gives the stomach walls a longer period of rest than can be secured through the use of ordinaary nourishment It has stood the test of sixteen years with a constantly increasing demand from physicians.

That it is absolutely the pure juice of the clam without any preservative is demonstrated by the fact that it spoils with undue exposure to the air. Burnham's Clam bouillon is put up in glass bottles and sold in pints and half pints. This assures not only cleanlinless and convenience in serving but perfect purity and freshness. All the leading apothecaries and grocers sell it

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Fortunately, the error was discovered early and the more rational and scientific method of using the entire plant was substituted.

Without doubt there are fewer therapeutic nihilists today among the eclectic practitioners than any other school of medicine. It is due to the fact that they use almost exclusively the liquid medicines.

I do not wish to be understood that there is no place for the alkaloids in the medical practice, for I am willing to admit that there is. I do contend, however, that that place is very much smaller than many of its champions would have us believe.

Treatment of Eczematous Diseases.

An interesting article under this title appears in a recent issue of the Medical Summary, (Aug. 1905, p. 163), from the pen of Dr. W. R. D. Blackwood. After some general remarks relating to eczema and the various medicants employed against it, Dr. B— states: "Having recently failed in some bad cases of eczema, I tried a remedy which I noticed a reference to in an article of considerable merit from a writer of good points in therapeutics. I refer to thigenel, the sodium salt of sulphonic acid of a synthetic sulpho oil. Its odor is not unpleasant, but it reminds one of sulphurous acid; this, however, is not apparent on the skin or on the breath after application. One good thing about it is the prompt disappearance of skin irritation, so dreadful in babies. We all know the terrible digging which lacerates the face or scalp of young children who cannot stand the burning and itch. Sometimes the first application has stopped this after a long use of antipruritics.

But my main idea is to urge its trial in eczema of all varieties. I believe in all cases it is well to use it both externally and internally. Such as I treated in this way got well sooner than when the remedy was simply applied to the eruption. With me, mixture with distilled water seemed the better; I do not like ointments. If you do prefer unguents, the Ung. Ag. Rosa is clean and readily removed without rubbing —a matter of importance; for irritation must be avoided always. * * * In convalescence from variola this remedy is excellent, and, if used when desguamation proceeds, it serves to prevent transfer of the scales throughout the room, and thus lessens infection. So, also, with scarlatina. It is soothing in the height of the latter disease, and prevents scratching in young children.

One great difficulty with eczema remedies is the fact that, being usually metallic salts, they become poisonous after a time. This cannot happen with thigenol; it is non-toxic even when given internally in large doses."

Treatment of Constipation.

Permanent relief from this distressing condition is largely a matter of proper exercise and diet where there is no constitutional defect in the nervous system or alimentary canal. It is very often the result of habit in people who lead sedentary lives, particularly in women and persons who spend much time indoors. Another very

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common cause is the habit of eating food which is too concentrated. Logical treatment lies in the direction of eliminating the mechanical cause and establishing a habit which will enable the patient to dispense with drugs of all kinds if these have been necessary to overcome the condition. Exercise is of the greatest importance and special exercises, such as bending the body front and back, from side to side at the waist line, and massage over the track of the colon, will be of much benefit. Regularity is of great importance.

In regard to diet, probably one of the greatest causative factors is the eating of food which is too concentrated so that but little residue is left to stimulate peristaltic action of the intestines. Such diet also is deficient in moisture which causes the feces to collect in a hard mass difficult for the bowels to cast off. Fruits and the cereal foods must be depended upon to furnish a sufficient quantity of fiber to supply the necessary mechanical irritation to the intestines. Bread in any form except brown bread, is neither as healthful nor as nutritous as it should be when made from the modern white bolted flour for the reason that not only the phosphates and gluten of the wheat are practically eliminated, but there is not sufficient cellulose remaining for the conservation of healthy activity of the bowels. A whole wheat food such as Egg-O-See and whole wheat bread should replace to a large extent breadstuffs made from white bolted flour. Egg-O See is a whole wheat product, so prepared that *all* of the nutritive value of the wheat berry is preserved, including the fiber and cellulose. It is rich in carbohydrates, iron and protein and therefore is a valuable addition to the diet in this condition.

A True Sedative.

To secure a pleasant and reliable sedative and one that stimulates, nourishes and gives complete rest to tired nerves, without the harmful reaction of opiates, is the desire of every physician. The following extract

from a letter received from Dr. L. M. Plantz of Putney, Vt., explains the value derived from one nervine: "Daniel's Conct. Tinct. Passiflora Incarnata has really done more in my hands than has been claimed for it. One patient who has had epileptic fits for many years—three a week and sometimes three a day—has not had one for eleven weeks, and that, too, without taking the medicine when feeling 'as if he was going to have one.' It is perfectly wonderful the quieting, soothing effect it has on the nerves under any and all circumstances and the splendid condition in which it leaves the patient—simply the result of refreshing sleep."

Daniel's Passiflora may be used with assurance for all nerve disorders, because it possesses a pronounced specific action as a nerve sedative and hypnotic.

Carbuncle Cured.

Dr. Geo. E. Bahrenberg, Soldiers' Home, California, in writing of his good results with Campho-Phenique upon wounds, says: "A man came to me with a bad carbuncle on his breast. Non-surgical treatment, in past experience, has proven unsuccessful. Somewhat perplexed what to do, I struck upon the idea of using Liquid Campho-Phenique. I applied it full strength and was agreeably surprised, after the second day, to find the sore entirely disappeared, its progress arrested and a healthy wound remaining. I continued the same treatment and after eight days discharged the patient cured."

Samples and many more such testimonials supplied upon request to the Campho-Phenique Co., St. Louis, Mo.

The latest wrinkle for removing wrinkles has the endorsement of an eminent New York city surgeon, Dr. Robert T. Morris, who is the president of the New York Surgical Society, The technique of the treatment is so simple and the necessary adhesive plaster, which is required, is such a common and easily obtained article that if all that is claimed for the new remedy is borne out by subsequent trial it should take only a short time to transform the decrepit appearance of a large number of people who are worrying about one evidence of approaching old age heretofore irremediable.

The underlying principle of the treatment with sticking plaster is to keep the skin tense for a considerable period of time. This is best accomplished by applying the plaster before retiring, and permitting it to remain until the following morning. The important point to remember is to first draw the wrinkled skin tense before putting on the plaster. The instruction given is to stretch the skin with the first and second fingers of the left hand while the plaster in narrow strips is laid on the surface parallel with the wrinkle.

After a single application there will be a considerable improvement. No exact time can be stated for a complete cure, much depending upon the age of the individual and other factors. Not only is the skin not injured but its texture is improved: while the treatment removes the wrinkles it also beautifies the complexion.

A Japanese medical publication, the Sei-I-Kwai Medical Journal, contains a story of ingratitude which at the same time illustrates Japanese ingenuity. A patient had been in the habit of calling at a certain physician's office whenever a fit of coughing came over him, for the purpose of being relieved of his suffering by an injection of morphine. At such times the doctor permitted him to rest in an inner office for a few hours to sleep off the effect of the opiate. While this was going on the police department had its attention attracted by the patient who was continually pledging various valuable articles at a nearby pawn shop. Investigation developed the fact that all the goods had been stolen by the patient from the doctor's house. All the money he had thus obtained, the man confessed, he spent in paying the physician his professional fee!

This story is paralleled by the experience of a young doctor who was called to treat a poor woman. The kind hearted doctor not only gave advice and medicine gratuitously but presented five dollars to the unfortunate woman with which to purchase the necessities of life.

The next day he received a message not to call again. He subsequently learned that the woman had spent the money he gave to her in a rather novel manner. She sent for a homoepathic physician and paid him two dollars, and the remaining three dollars she expended as a first installment on a phonograph.

The committee in charge of the International Medical Congress, which will be held in Lisbon from April 19 to 26, 1906, has written asking for the contribution of papers on the following medico-legal subjects, and saying that as yet no titles of communications touching on any of these subjects have been received from this country:

The signs of virginity and of defloration in medico-legal relations.

Hand marks and finger prints; their medico-legal importance.

The medico-legal importance of the carunculae myrtiformes.

The mechanism of death by hanging.

The value of bacteriologic examination of vulvo-vaginal discharges in the determination of venereal contagion.

The signs of death by drowning.

Ecchymoses in legal medicine.

Spontaneous and criminal abortions from a medico-legal point of view.

Medico-legal investigation of blood stains.

The relations between the seat of cerebral contusions and the point of application of the agent which produced them.

Epilepsy in legal medicine.

The induction of abortion; when is it permissible?

The value of legal medicine in the study of criminal law.

The best legislation for the protection of the "medical secret" (the obligation imposed upon physicians to treat as inviolable all information concerning patients obtained while in the discharge of their professional duties).

The effects of the civil and penal law towards the newborn living infant.

Distinction between the natural openings in the hymen and tears of this membrane.

Criminal vulvar copulation.

Organization of medico-legal services.

If any of the readers of this communication intend to take part in the discussions of this section of the congress, or to prepare papers for it on any of the subjects mentioned, or on any other subject in medicine or surgery, he should inform the secretary of the American Committee.

RAMON GUITERAS,
Secretary American National Committee.
75 West 55th street, New York.

Therapeutics of Seawater.

From prehistoric times the value of sea-bathing as a therapeutic measure has been recognized. Even in health it acts as a pleasant and useful tonic, and every one knows the invigorating effect of a swim in the sea. Well known as is the fact, its explanation is by no means so obvious. As there is practically no absorption of salt water through the skin, the good effects of sea-bathing have been attributed to the action of the waves, the exercise, the fresh air, and the winds, while some hold that an essential part of the benefit derived from sea-bathing is to be attributed to the water that is swallowed. It is more likely, however, that sea-water has certain chemical properties of therapeutic activity, and this suggestion is supported by the known value of sea-bathing in various cutaneous diseases. The nature of these chemical properties has been examined by many investigators, and Legourd in particular has emphasized the importance as an antiseptic of a substance, called by him "hermetin," and said to contain oxygenated compounds of chlorine.

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Because it is a saturated solution of nucleo-proteids and nucleo-albumens, which are considered by Hammarsten as " complex phosphorized bodies and the nutritive material for the cells," together with the digestive enzymes (nucleo-enzymes) in a menstrum of pancreatized gluten and peptone with less than 14 per cent of alcohol by weight.

It is a direct cell nutrient and builder and must not be confused with the ordinary liquids foods.

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Within the last few years, however, therapeutists have not rested content with the external uses of salt water, but have busied themselves in experimenting with it internally. It has been pointed out that the injection of saline solution is a distinct adjuvant in the experimental production of immunity. It is believed that in this case the saline solution aids in the solution of alexins out of the protoplasm of the cells, thereby increasing the protective powers of the body juices. At the same time it probably hastens the secretion of antitoxins, as it has been shown to do in the case of such poisons as strychnine, arsenic and ricin. This protective action of salt solution may go some way to explain the excellent results obtained in France by Simon and Quinton in the treatment of tuberculosis by subcutaneous injections of sea-water. The fluid was Atlantic water, reduced by dilution to isotonism with the blood, and the dosage was one hundred to three hundred cubic centimetres every three or four days. In fifteen out of eighteen cases so treated—most being cases of pulmonary phthisis—there was marked improvement. It is unnecessary to speak of the uses of normal saline solution, as there is hardly a field in medicine or surgery where its value has not been proved. It is to be noted, however, that the meaning of the term "normal saline" is changing from day to day. It is no longer a mere solution of sodium chloride of definite strength, but if it is to approach closely to the physiological body-fluid, it must, as Ringer's solution does, contain small quantities of certain other salts. In fact, the more "normal saline" is defined the more it is seen to approach, in its chemistry, to sea-water, which, indeed, may be regarded as having supplied the protoplasmic fluid to the primitive cell-life of our earliest ancestors.—Medical Press and Circular.

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Antidipsole is the result of the experience and experiments conducted for more than a quarter of a century by one of the best physicians in the profession, having opportunity to test its effectiveness in thousands of cases of drunkenness. No doctor can read the formula and say else than that theoretically it should be all that is claimed. A trial will prove that practically it does all that it promises. For full particulars address Peter-Neat-Richardson Co., Louisville, Ky.

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a superior tissue building food. It is concentrated, very appetizing, and has high nutritive value. It is acceptable and soothing to the gastric membrane when other foods cannot be tolerated, and the ease with which it is absorbed saves the patient's strength. It has a constantly increasing demand from Physicians.

That it is absolutely the pure juice of the clam without any preservatives, is demonstrated by the fact that it spoils with undue exposure to the atmosphere. **BURNHAM'S CLAM BOUILLON** is put up in glass bottles and sold in pints and half-pints. This assures not only cleanliness and convenience in the serving but perfect purity and freshness while using in the sick room. All the leading apothecaries and grocers sell it.

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One of the most difficult things that the doctor has to contend with is to procure a reliable article of Cod Liver Oil. In Nutrivine, prepared by the Peter-Neat-Richardson Co., Louisville, Ky., will be found an example of a properly prepared medicine of this character. It contains the properties of the best Norwegian Cod Liver Oil, without its nauseous and offensive taste.

The Danger of the Handshake.

It would seem that none of our social customs are safe from the iconoclastic hammer of the hygienist gone mad. Some time ago we were warned against the danger of reading our letters and our newspapers over the morning tea and toast, lest perchance the lurking microbe should be added to our meal. Now, a deeply rooted custom of civilization is threatened—the social handshake. The leader of this new crusade is Dr. Valentine Valpasse, a physican attached to the Persian Embassy at Constantinople. He has discovered that every square centimeter of the skin of the hand shelters more than 80,000 microbes, while the same area on the arm or breast has not more than 25,000 inhabitants. The obvious suggestion would be to substitute an arm-grip or a rubbing of chests for the handshake as a social salute, but even this is too septic for Dr. Valpasse. There must be no contact. He has adopted, and he suggests to Europe to adopt, the Eastern mode of salutation of pointing to the heart, the lips, and the forehead. However, lest this reform appear too radical, it may be permissable to shake hands with the gloved hand, as it is stated that King Edward does when he travels abroad. Perhaps, if Dr. Valpasse continues his investigations he will find that the average glove has quite an extensinve bacterial flora, so that if the handshake is to be permitted at all, it might be wiser that we should be protected every time we meet a friend by a fresh pair of sterilised gloves.

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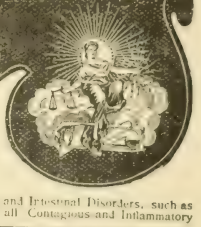

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A Peculiar Form of Traumatic (Chemical) Conjunctivitis.

By A. M. Hutton, M. D., Navarre, Mich.

Some miners employed in sinking a shaft near here encountered numerous streams of sulphur water. Though a careful analysis of the water has not been made it is sufficient for me to state that it gives rise to an acute conjunctivitis. The pain is most excruciating, and can be relieved only by the use of cocaine, and even cocaine is useless unless preceded by Adrenalin Chloride.

My practice has been to use Adrenalin Chloride, 1-2000, and to follow this with cocaine, 2 per cent. solution, and then to give the patient a boracic-acid-and-cocaine solution to be used until all symptoms have disappeared.

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The Convalescent Stage of Typhoid Fever.

By Wm. A. Wood, M. D.

The stage of convalescence in typhoid fever, unlike that of most other diseases, imposes upon the physician the gravest responsibilities. If we date this change in the patient's condition from the period of defervescence, for at least two weeks thereafter, danger lurks in nearly every dietetic and therapeutic procedure adopted in the management of this critical situation. While the gravity of the convalescent period depends very much upon the amount of injury inflicted upon the organs by the disease during its protracted course, exhaustion from inanition is a peril which every convalescent is compelled to face. In addition to this, when the bacterial intoxication has been profound, neuritis, resulting in paraplegia, poliomyelitis, parenchymatous degenerations, perforation from isolated ulcers, post-typhoid insanity and relapses are among the possible developments of the convalescent stage. But the central and supreme features of typhoid-fever pathology are inanition, asthenia and degeneration. These arise from the localization of its characteristic lesions in the intestinal canal, through which the processes of alimentation are mainly elaborated. The stomach becomes involved in the ehain or morbid phenomena and gradually the functions of the whole gastro-intestinal apparatus become so enfeebled that digestion and assimilation are practically abolished.

This brief presentation of the clinical picture of the convalescent stage of typhoid fever furnishes a key to rational therapy. In the upbuilding of nutrition and regeneration of the blood and tissue of the body our only safety will be found. It is necessary to awaken the dormant, torpid nutritive processes and restore them to normal physiological activity. Here some coaxing is necessary to arouse in the digestive organs the proper energy for the important work assigned to them. Correct principles of hygiene, diet and medication, with a careful, intelligent nursing, are the supreme factors in the successful management of the convalescent stage. The digestive secretions are deficient, both in quantity and quality. This condition must be changed before the faulty assimilative powers and impaired metabolic processes can be improved. The environment of the patient must be favorable. The apartment of the patient should be supplied with an abundance of pure, fresh air, and the temperature of the sick-room, in the early stage of convalescence, should be kept as nearly as possible at 60 degrees. Pure, fresh air, is quite as important in these cases as in tuberculosis. Food must conform to the existing conditions of the digestive organs. It must undergo normal changes in the stomach before passing into the intestinal canal, otherwise it will act as a direct irritant to the mucous membrane, and at the same time undergo fermentation and decomposition with the formation

of gas, producing also poisons which may be absorbed and pass into the circulation.

While the wisest judgment must govern the selection of food, it must not be forgotten that the perilously low level of the physical forces is largely due to enforced starvation from a long continued monotonous liquid diet. Many authorities advise a continuance of this martyrdom through the first week of convalescence, but nature rebels against such dogmas. The patient's appetite calls for more substantial nourishment, and as the majority of deaths result from asthenia, the risk from the moderate employment of solid food will not be as great as that from a continuation of the starving process. Sometimes a rise of temperature occurs early in the convalescent period, and that furnishes an excuse for prolonging the use of liquid food, but accurate observation teaches that this condition is largely due to exhaustion and defective elimination. Relapses sometimes occur, but they are not chiefly due to the changes of diet, hence such considerations should not influence the physician in favor of a policy which will at least retard recovery, if it does not cause death. As soon as the temperature becomes normal, and the stools have lost the typhoid characteristics, a change of diet, at least tentatively, is practically safe. Beginning with semi-solids and gradually replacing these with solids, is a plan that the most conservative practitioner should not object to. To introduce the change, a soft egg and a little milk-toast may be tried. Later on, custards, corn-starch and rice pudding, finally, chopped meat, the breast of chicken and dry bread with meat juices or fruit jelly may be used in moderation.

Alimentation ranks first in importance, both in the early and late management of typhoid fever. The physical forces should be conserved throughout the entire course of the disease. The disease pursues a protracted course, and is to a great extent a self-limited disease. The patient must be kept alive until its force is spent, and then regeneration must follow. When death results from asthenia, the heart first gives away. Cardiac asthenia is, therefore, a threatening symptom, especially in the convalescent stage. For this reason the patient should not be permitted to get out of his bed immediately after defervescence, or until he is sufficiently strong to make the change without risk. It is better to have him sit up and change his position in bed frequently for two or three days before sitting in a chair. During these experimental movements he should constantly enjoy the benefit of fresh air. This is nature's tonic which never fails in its therapeutic effects.

And now, in emphasizing the importance of alimentation in convalescence from typhoid fever, another question arises: When solid food is substituted for liquid, and fails to be properly digested and assimilated in consequence of the weakened powers of the digestive organs, together with their defective secretions, can we call in any artificial aids to help us out of the dilemma? There are many digestants, restoratives and tonics possessing a high order of merit from which a selection might be made, but in the conditions now under discussion the desired agent must contain the specific therapeutic properties required to meet the pressing indications. Here we are confronted with anemia, asthenia and faulty digestive secretions. To meet all of these conditions I have found that Johann Hoff's malt extract with iron (peptonate of iron and manganese), heads the list of all our available agents. It restores impoverished blood, renews degenerated tissues, increases and improves the digestive secretions, and augments the appetite. For adults I usually give it in doses of half a wineglassful to a wineglassful, three or four times a day, as the case may require. In the proper doses it not only aids the disabled digestive functions in preparing the food for assimilation and absorption, but through the scientific combination of malt extract with the peptonate of manganese and iron, it constitutes an ideal nutriment for all patients in the convalescent stage of typhoid fever. It contains only three per cent. of alcohol, which is sufficient to add a slightly stimulating effect to its tonic and nutriment properties.

To better illustrate the effects of this remedial agent in the convalescent stage of typhoid fever, especially in its relation to the utilization of solid food as soon as possible after defervescence, I take the liberty of referring to a few recent cases from practice.

Case 1.—Male; age, thirty-five. Came under my care July 15th, with all the symptoms of a grave case of typhoid fever. He was of highly nervous temperament and a brain-worker, being a lawyer by profession. With careful regulation of diet, good nursing and little medication, he escaped many of the dangerous complications of this disease, and with the exception of slight mental aberrations and extreme nervous exhaustion, he passed in twenty-four days to the stage of convalescence. Now, on account of his disgust for all kinds of food, he became very feeble. His mental troubles increased until I feared the development of a typical typhoid insanity. At this juncture the open-air treatment occurred to me as desirable. He was placed in a tent pitched in a shady, open lawn connected with the house. Here he breathed nothing but fresh summer air. He began to relish food. His mental faculties, however, did not improve. I prescribed the hypophosphites and diversified his food, but he did not make any substantial gains. He still suffered from mental hallucinations. I now gave him a wineglassful of Johann Hoff's malt extract with iron, three times a day. Improvement was immediately noticeable. He was able to digest the most substantial food, and gradually gained in strength. His appetite improved, and his mental troubles became less each day. In ten days he was able to walk around the yard. The malt and iron preparation was continued for three weeks, when he was discharged, and so far restored to health that he resumed his usual professional duties.

Case 2.—Female; age, ten. I was called to see this little girl on August 1st. Found a well-marked case of typhoid fever. Under my usual plan of treatment she passed through all of the different stages to convalescence without any grave symptoms. The intestinal lesions were somewhat serious, causing obstinate diarrhea and interfering with necessary nutrition. The stomach also sympathized with the intestinal disorders, and would retain nothing but small quantities of water and liquid nourishment. When the fever was broken I tried a little solid food, which she refused to take. The only thing she craved was roasted peanuts. These were allowed in moderate quantities. I began at once with Johann Hoff's malt extract with iron in tablespoonful doses every three hours. Improvement immediately followed, and in a few days she enjoyed more natural food. In two weeks she was restored to a fair state of health and was discharged.

Case 3.—Male; age, twenty-five. I was called to this case August 6th. Diagnosis of typhoid fever was readily made. The case progressed favorably until the third week, when a severe attack of intestinal hemorrhage occurred. Under special restrictions this was speedily checked. When defervescence occurred, early in the fourth week, the patient was weak, anemic and emaciated. I gave him fresh air from three open windows and one door, and began with semi-solid food, which was taken with great reluctance and imperfectly digested until I ordered the malt extract with iron, as used in the above cases. In a few days he demanded more substantial food. Nothing now occurred to retard

convalescence, and the patient made a rapid recovery. He was soon discharged in a fairly good condition of health.

Cirrhosis of the Liver from a New Standpoint.

Bleichroder (Virchow's Archiv) has been struck by the close resemblance of the gastric lesions of cirrhosis of the liver and with those of blood diseases, such as pernicious anemia and leucemia. In following up the subject, the author found a number of other points of resemblance. Thus, a marked anemia is often present in cirrhosis, and the red cells do not form rouleaux. Both cirrhosis and leucemia are often accompanied by ascites, and the splenic tumor in the former disease is certainly not due alone to stasis of the portal blood, for it is often well marked before other signs of portal obstruction are present. Furthermore, the spleen is much softer than it would be in simple congestion, and the veins contain many lymphocytes. An important point is the usual occurrence of red bone-marrow in cirrhosis, where normally yellow marrow exists. There is little evidence to assume that cirrhosis is a primary disease of the liver cells, for even in advanced cases their functions are preserved, that is bile and urea are still formed, and the carbohydrate mechanism is not interfered with. It is much more rational to assume that cirrhosis belongs to the class of blood diseases, and that the characteristic lesions are due to the transport of lymphocytes from the spleen. These cells then migrate through the vessel walls, collect around the portal veins in the liver, and are finally converted into connective tissue. The same process, to a lesser extent, is seen in many acute infectious diseases where a hyperplasia of the spleen exists, and some of the lymphocytes are carried into the liver. The different forms of cirrhosis described are probably analogous in their origin, and transition forms occur frequently. The connective tissue is never pure, but is always mixed with round cells, a small number of which persist even in advanced stages. Variations in size and appearance of the liver do not depend upon different forms of inflammation, but merely upon the eventual distribution of the connective tissue. If jaundice occurs it is not obstructive in nature, since the gall-bladder always contains bile, and the passages are patent. It must be explained by the disintegration of red blood cells so common with all blood diseases, and has thus the same origin as the pigmentation, the deposit of iron in many organs, the anemia and the increased excretion of urobilin so frequently found in cirrhosis. Other organs may also participate in the hyperplasia, such as the kidneys, and where diabetes also exists, the pancreas. The pro-

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cess in these organs is precisely the same as that in the liver. Banti's disease should not be looked upon as a disease by itself, but merely as a form of cirrhosis. The proper therapy of cirrhosis is by arsenic, iron and quinine just as in anemia.

The Pathology of Clothes.

A witty writer has contributed to St. George's Hospital Gazette a prospectus of a proposed work on the pathology and treatment of diseases and accidents of the toilet. The prospectus is fortified by alleged extracts from the forthcoming volume, which for pure fun and cleverness of caricature are unrivalled. Among the lesions described are "perforating ulcer of the sock," "false passages of the vest," "hairy mole of the shirt-cuff," "idiopathic atrophy of the pyjamas," "sloughing of the posterior foramen of the collar-band," and "prolapsus trouseri," while a further chapter is said to be devoted to affections peculiar to evening dress, such as "Addison's disease of the shirt-front," "madura pump," and "inoperable volvulus of the neck-tie." The causation of false passage of the vest is described thus: "The head, being hurriedly thrust into the garment, lacerates the fabric, and emerges through the posterior wall of the axilla instead of through the cervical canal." "The best treatment is prolonged rest in bed." With regard to perforating ulcer of the sock, "treatment by simple suture or the purse-string ligature is not to be recommended. Each perforation must be carefully grafted by an expert." We hear much nowadays of the overworked condition of the medical student, so that we can all the more admire the energy and research of this writer in treating a hitherto unbroken field.—Medical Press and Circular.

Important Announcement.

The Alkaloidal Clinic has changed its name to The American Journal of Clinical Medicine.

With the January issue in preparation, we change the name of The Alkaloidal Clinic to one which more fully embodies the scope of our propaganda, namely, The American Journal of Clinical Medicine.

We have added to our present strong editorial force (all of which is retained, and with no change in management, or any financial change whatever), Dr. Wm. J. Robinson, of New York City, who will conduct a department of "Dermatology and Genitourinary Diseases;" Dr. Emory Lanphear, of St. Louis, who will conduct a department of "Surgery, Obstetrics and Gynecology," and other departments will be added as arrangements can be made therefor.

With this additional force, the make-up of the journal will be improved in many ways. The best minds in this country and Europe will contribute articles which will be of inestimable value to the general practitioner who is willing to learn and anxious to keep up with the times. Our platform is as broad as the world. We believe the physician should pluck the health-giving fruit, it matters not from what garden. Active principle therapy, surgery, synthetic chemistry, massage, electricity, serum therapy, hydro-therapy, radio-therapy, etc., etc., all of these offer us in mighty weapons for our battle with the enemies of the human race, disease and death, and the new, enlarged, rejuvenated, and strengthened Clinic now called (as better indicating its scope), "The American Journal of Clinical Medicine," will include all these weapons in its armamentarium. It will give its readers all that is best in medicine, all that is best in the literature of the world, all that is most helpful, most practical.

The underlying principle of our great work is to safeguard the medical profession, to help them to higher planes of practice, to greater personal success, to bettered conditions in every possible way.

We are opposed to quackery, however and wherever it appears. We are opposed to proprietary advertising to the laity against the medical profession, to the detriment of the people.

We are opposed to the secret nostrum and the rum remedy, decrying their exploitation to the profession, and more especially to the people, as a body-wrecking, soul-destroying crime that should be suppressed.

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We are fully alive to the great awakening of the public conscience now going on, proposing to stand on the very firing line of the movement for professional betterment and the public good, never taking a back step till a complete victory is won, and then we'll stick, too. We shall appreciate your cooperation.

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